Base Load Power Hub (BLPH)

MATERIAL TRACEABILITY AND CERTIFICATES
PIPING

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1 INTRODUCTION AND INSTRUCTIONS FOR USE

This dossier collects the material certificates related to the PIPING supplied for the BLPH project. It has been structured to facilitate both systematic consultation and targeted searches.

The documentation is primarily organised by Purchase Order (PO), which is reflected as bookmarks within the file. Each bookmark provides direct access to the corresponding set of material certificates.

In some cases, a single Purchase Order is subdivided into multiple sub-dossiers. This occurs when materials under the same order have been delivered in different batches. Each sub-dossier is assigned a unique internal reference code, enabling clear traceability of the supplied items.

For ease of navigation, a traceability file is provided at the beginning of the dossier. This document also serves as an index, linking key information—such as heat numbers—to the relevant material certificates. By searching for a specific heat number within this file, users can quickly locate the corresponding certificate within the dossier.

In addition, the entire dossier is fully searchable. This allows users to retrieve documents using any relevant search criteria (e.g. heat number, certificate number, material grade), providing flexibility in how the information is accessed.

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2 MATERIAL TRACEABILITY REPORT

This document undergoes an issuance cycle within EDMS Fusionlive". Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
FLOWMETER_SK01	00	1	A	-	2	1	Flange WN ›10" Thk.4.19mm 150LB RF ASTM A182 Gr.F316/316L	DF309/1	1724000839	01060	23-04271	
FLOWMETER_SK01	00	1	A	-	2	1	Flange WN ›10" Thk.4.19mm 150LB RF ASTM A182 Gr.F316/316L	DF309/1	1724000839	01060	23-04271	
FLOWMETER_SK01	00	1	A	-	3	1	Flange LWN ›2" 150LB RF ASTM A182 Gr.F316/316L	E230125	1724001966	00010	3.825	
FLOWMETER_SK01	00	1	A	-	3	1	Flange LWN ›2" 150LB RF ASTM A182 Gr.F316/316L	E230125	1724001966	00010	3.825	
FLOWMETER_SK01	00	1	A	-	1A	0,894	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
1	01	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
1	01	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
1	01	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
1	01	1	A	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
1	01	1	A	01SS	1A	2,177	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
1	01	1	A	01SS	1B	0,174	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
1	01	1	B	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
1	01	1	B	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
1	01	1	B	01SS	1C	2,594	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
1	01	1	B	01SS	1D	0,412	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
1	01	1	C	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
1	01	1	C	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
1	01	1	C	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
1	01	1	C	01SS	1E	6	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
1	01	1	C	01SS	1F	1,839	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
1	01	1	C	01SS	1G	1,223	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
1	01	1	C	01SS	1H	1,022	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
1	01	1	D	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
1	01	1	D	01SS	1I	0,695	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
1	01	1	D	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
1	01	1	D	01SS	1I	0,695	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
1	01	1	E	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
1	01	1	E	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
1	01	1	E	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
1	01	1	E	01SS	7	1	45 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	E62123	1724000839	00230	MC-TYF-6-20080627118	
1	01	1	E	01SS	1J	0,103	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
1	01	1	E	01SS	1K	0,117	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
2	01	1	A	01HSS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724001267	00070	24-01-0126	
2	01	1	A	01HSS	1A	0,223	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
2	01	1	A	01HSS	1B	2,964	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
2	01	1	B	01HSS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724001267	00070	24-01-0126	
2	01	1	B	01HSS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724001267	00070	24-01-0126	
2	01	1	B	01HSS	1C	4,686	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
2	01	1	B	01HSS	1D	2,149	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
2	01	1	C	01HSS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724001267	00070	24-01-0126	
2	01	1	C	01HSS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724001267	00070	24-01-0126	
2	01	1	C	01HSS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724001267	00070	24-01-0126	
2	01	1	C	01HSS	1E	3,949	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
2	01	1	C	01HSS	1F	0,314	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
2	02	2	D	01HSS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724000839	00260	24-01-0126	
2	02	2	D	01HSS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724000839	00260	24-01-0126	
2	02	2	D	01HSS	1G	4,151	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
2	02	2	D	01HSS	1H	1,013	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
2	02	2	D	01HSS	1I	1,775	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
2	02	2	D	01HSS	1M	1,775	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
2	02	2	E	01HSS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724000839	00260	24-01-0126	
2	02	2	E	01HSS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724000839	00260	24-01-0126	
2	02	2	E	01HSS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724000839	00260	24-01-0126	
2	02	2	E	01HSS	1J	0,404	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
2	02	2	E	01HSS	1K	1,401	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
2	02	2	E	01HSS	1L	0,147	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
3	02	1	A	01CS	2	1	Reducer Concentric BW ›1"x3/4" Thk.4.55mmx3.91mm ASTM/ASME A/SA420 Gr.WPL6	56-123056	1724000839	00730	4527-P8	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by		
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:		
Project	**Hollandse Kust Noord Wind Park Project**			
Job	**123A90**			
Discipline	**PIPING**			
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
3	02	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
3	02	1	A	01CS	4	1	Flange WN ›3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01210	2024-C_MFF-01243	
3	02	1	A	01CS	1A	0,2	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	02	1	A	01CS	1B	1,595	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	02	1	A	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
3	02	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
3	02	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
3	02	1	B	01CS	7	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
3	02	1	B	01CS	1C	5,488	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	02	1	B	01CS	1R	2,489	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	02	1	C	01CS	7	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
3	02	1	C	01CS	1D	0,719	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	02	1	D	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
3	02	1	D	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
3	02	1	D	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
3	02	1	D	01CS	1E	1,498	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	02	1	D	01CS	1F	1,166	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	02	1	D	01CS	1G	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	00	2	E	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
3	00	2	E	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
3	00	2	E	01CS	1H	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	00	2	E	01CS	1I	0,677	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	00	2	E	01CS	1J	0,176	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	00	2	F	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	
3	00	2	E	01CS	1J	0,176	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	00	2	F	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	
3	00	2	F	01CS	1K	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	00	2	F	01CS	1L	1,901	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	00	2	G	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
3	00	2	G	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
3	00	2	G	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
3	00	2	G	01CS	1N	0,814	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	00	2	G	01CS	1O	0,505	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	00	2	G	01CS	1P	0,304	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
3	00	2	H	01CS	4	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
3	00	2	H	01CS	1Q	3,915	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
4	00	1	A	01CS	2	1	Reducer Concentric BW ›2"x1" Thk.5.54mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	433876	1724000839	00710	4527-P6	
4	00	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
4	00	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
4	00	1	A	01CS	4	1	Flange WN ›2" Thk.5.54mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70486	1724000839	01190	2024-C_MFF-01243	
4	00	1	A	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
4	00	1	A	01CS	1A	0,163	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
4	00	1	A	01CS	1B	0,109	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
4	00	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
4	00	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
4	00	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
4	00	1	B	01CS	1D	1,674	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
4	00	1	B	01CS	1E	1,159	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
4	00	1	C	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
4	00	1	C	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
4	00	1	C	01CS	1F	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
4	00	1	C	01CS	1G	2,556	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
4	00	1	C	01CS	1H	0,326	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
4	00	1	D	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
4	00	1	D	01CS	1C	0,723	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
5	01	1	A	03HSS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
5	01	1	A	03HSS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by		
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:		
Project	**Hollandse Kust Noord Wind Park Project**			
Job	**123A90**			
Discipline	**PIPING**			
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
5	01	1	A	03HSS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
5	01	1	A	03HSS	1A	0,065	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	1	A	03HSS	1B	0,443	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	1	A	03HSS	1C	0,563	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	1	B	03HSS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
5	01	1	B	03HSS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
5	01	1	B	03HSS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
5	01	1	B	03HSS	1D	1,053	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	1	B	03HSS	1E	2,769	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	1	B	03HSS	1F	0,625	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	1	C	03HSS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
5	01	1	C	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
5	01	1	C	03HSS	1G	0,634	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	1	D	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
5	01	1	D	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
5	01	1	D	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
5	01	1	D	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
5	01	1	D	03HSS	1H	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	1	D	03HSS	1I	0,462	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	2	E	03HSS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
5	01	2	E	03HSS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
5	01	2	E	03HSS	3	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
5	01	2	E	03HSS	5	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
5	01	2	E	03HSS	6	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
5	01	2	E	03HSS	5	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
5	01	2	E	03HSS	6	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
5	01	2	E	03HSS	7	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	
5	01	2	E	03HSS	7	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	
5	01	2	E	03HSS	1J	0,754	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	2	E	03HSS	1K	0,25	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	2	E	03HSS	1L	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	2	E	03HSS	1M	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	2	E	03HSS	1N	0,685	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	2	F	03HSS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
5	01	2	F	03HSS	3	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
5	01	2	F	03HSS	3	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
5	01	2	F	03HSS	3	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
5	01	2	F	03HSS	3	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
5	01	2	F	03HSS	4	1	Cap BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	519724	1724000839	00190	519724	
5	01	2	F	03HSS	5	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
5	01	2	F	03HSS	16	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
5	01	2	F	03HSS	1O	0,956	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	2	F	03HSS	1P	0,774	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	2	F	03HSS	1V	2,439	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	2	F	03HSS	1W	3,924	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	2	F	03HSS	1X	3,924	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	3	G	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
5	01	3	G	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
5	01	3	G	03HSS	1Q	0,248	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	3	G	03HSS	1R	3,734	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	3	H	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
5	01	3	H	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
5	01	3	H	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
5	01	3	H	03HSS	3	1	Cap BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	519724	1724000839	00190	519724	
5	01	3	H	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
5	01	3	H	03HSS	5	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
5	01	3	H	03HSS	6	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
5	01	3	H	03HSS	1S	3,794	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	3	H	03HSS	1T	3,924	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
5	01	3	H	03HSS	1U	3,924	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
6	01	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
6	01	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
6	01	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
6	01	1	A	01HSS	1A	0,148	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
6	01	1	A	01HSS	1B	0,945	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
6	01	1	A	01HSS	1C	1,441	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
6	01	1	B	01HSS	4	1	Flange WN ›6" Thk.3.4mm 150LB RF ASTM A182 Gr.F316/316L	DK782	1724000839	01000	1000028548/57 REV.1	
6	01	1	B	01HSS	1D	0,423	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
6	01	1	C	01HSS	2	1	Reducer Eccentric BW ›6"x4" Thk.3.4mmx3.05mm ASTM A403 Gr.WP316/316L	HTA077-04-103ER	1724000839	00430	PSA3-FT-47152	
6	01	1	C	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
6	01	1	C	01HSS	4	1	Flange WN ›6" Thk.3.4mm 150LB RF ASTM A182 Gr.F316/316L	DK782	1724000839	01000	1000028548/57 REV.1	
6	01	1	C	01HSS	5	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
6	01	1	C	01HSS	1E	0,358	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
6	01	1	C	01HSS	STD C-40	1	PAD - STD C-40	NJ112	1724000839	00090	416	
7	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
7	00	1	A	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
7	00	1	A	01CS	1A	0,153	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
7	00	1	A	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
7	00	1	A	01CS	1B	1,299	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
7	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
7	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
7	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
7	00	1	B	01CS	1C	0,935	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
7	00	1	B	01CS	1D	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
7	00	1	B	01CS	1E	2,188	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
7	00	1	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
7	00	1	C	01CS	1F	0,977	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
8	00A	1	A	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
8	00A	1	A	01HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
8	00A	1	A	01HSS	1A	1,069	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
8	00A	1	A	01HSS	1I	0,2	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
8	00A	1	B	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
8	00A	1	B	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
8	00A	1	B	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
8	00A	1	B	01HSS	1B	2,835	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
8	00A	1	B	01HSS	1C	1,09	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
8	00A	1	B	01HSS	1H	0,2	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
8	00A	1	C	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
8	00A	1	C	01HSS	1D	3,789	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
8	00A	1	C	01HSS	1E	0,45	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
8	00A	1	D	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
8	00A	1	D	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
8	00A	1	D	01HSS	1F	1,327	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
8	00A	1	D	01HSS	1G	0,183	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
9	02	1	A	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
9	02	1	A	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
9	02	1	A	03HSS	1A	0,79	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
9	02	1	B	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
9	02	1	B	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
9	02	1	B	03HSS	1B	0,092	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
9	02	1	C	03HSS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00560	JNDIA2023-GW1177-01	
9	02	1	C	03HSS	3	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
9	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
9	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
9	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
9	02	1	C	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
9	02	1	C	03HSS	6	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
9	02	1	C	03HSS	1C	0,318	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
9	02	1	C	03HSS	1D	0,116	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
9	02	1	C	03HSS	1E	1,13	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
9	02	1	C	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
10	02	1	A	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
10	02	1	A	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
10	02	1	A	03HSS	1A	0,79	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
10	02	1	B	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
10	02	1	B	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
10	02	1	B	03HSS	1B	0,092	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
10	02	1	C	03HSS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00560	JNDIA2023-GW1177-01	
10	02	1	C	03HSS	3	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
10	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
10	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
10	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
10	02	1	C	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
10	02	1	C	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
10	02	1	C	03HSS	6	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
10	02	1	C	03HSS	1C	0,318	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
10	02	1	C	03HSS	1D	0,116	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
10	02	1	C	03HSS	1E	1,13	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
10	02	1	C	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
11	02	1	A	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
11	02	1	A	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
11	02	1	A	03HSS	1A	0,79	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
11	02	1	B	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
11	02	1	B	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
11	02	1	B	03HSS	1B	0,118	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
11	02	1	C	03HSS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00560	JNDIA2023-GW1177-01	
11	02	1	C	03HSS	3	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
11	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
11	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
11	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
11	02	1	C	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
11	02	1	C	03HSS	6	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
11	02	1	C	03HSS	1C	0,292	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
11	02	1	C	03HSS	1D	0,116	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
11	02	1	C	03HSS	1E	1,13	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
11	02	1	C	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
12	02	1	A	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
12	02	1	A	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
12	02	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
12	02	1	A	03HSS	1B	0,516	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
12	02	1	B	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
12	02	1	B	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
12	02	1	B	03HSS	1C	0,426	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
12	02	1	C	03HSS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
12	02	1	C	03HSS	3	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
12	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
12	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
12	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
12	02	1	C	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by		
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:		
Project	**Hollandse Kust Noord Wind Park Project**			
Job	**123A90**			
Discipline	**PIPING**			
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
12	02	1	C	03HSS	6	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
12	02	1	C	03HSS	1D	0,318	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
12	02	1	C	03HSS	1E	0,116	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
12	02	1	C	03HSS	1F	1,13	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
12	02	1	C	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
13	02	1	A	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
13	02	1	A	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
13	02	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
13	02	1	A	03HSS	1B	0,516	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
13	02	1	B	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
13	02	1	B	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
13	02	1	B	03HSS	1C	0,426	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
13	02	1	C	03HSS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00560	JNDIA2023-GW1177-01	
13	02	1	C	03HSS	3	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
13	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
13	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
13	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
13	02	1	C	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
13	02	1	C	03HSS	6	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
13	02	1	C	03HSS	1D	0,318	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
13	02	1	C	03HSS	1E	0,116	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
13	02	1	C	03HSS	1F	1,13	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
13	02	1	C	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
14	02	1	A	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
14	02	1	A	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
14	02	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
14	02	1	A	03HSS	1B	0,516	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
14	02	1	B	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
14	02	1	B	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
14	02	1	B	03HSS	1C	0,426	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
14	02	1	C	03HSS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00560	JNDIA2023-GW1177-01	
14	02	1	C	03HSS	3	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
14	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
14	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
14	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
14	02	1	C	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
14	02	1	C	03HSS	6	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
14	02	1	C	03HSS	1D	0,318	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
14	02	1	C	03HSS	1E	0,116	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
14	02	1	C	03HSS	1F	1,13	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
14	02	1	C	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
15	00	1	A	01HSS	3	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
15	00	1	A	01HSS	1A	0,47	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
15	00	1	B	01HSS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724001267	00070	24-01-0126	
15	00	1	B	01HSS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724001267	00070	24-01-0126	
15	00	1	B	01HSS	1B	0,751	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
15	00	1	B	01HSS	1C	0,207	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
16	01	1	A	01HSS	3	1	Tee BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	LN008-1	1724000839	00470	PSA3-FT-47104	
16	01	1	A	01HSS	4	1	Tee Reducing BW ›2"x3/4" Thk.2.77mmx2.87mm ASTM A403 Gr.WP316/316L	221008AS16	1724000839	00580	10303342	
16	01	1	A	01HSS	4	1	Tee Reducing BW ›2"x3/4" Thk.2.77mmx2.87mm ASTM A403 Gr.WP316/316L	221008AS16	1724000839	00580	10303342	
16	01	1	A	01HSS	5	1	Tee BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	MT220055	1724000839	00460	22-09-0585	
16	01	1	A	01HSS	6	1	Tee Reducing BW ›1.1/2"x3/4" Thk.3.68mmx2.87mm ASTM A403 Gr.WP316/316L	12B258	1724000839	00610	10303342	
16	01	1	A	01HSS	7	1	Reducer Concentric BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	J0043-1	1724001267	00350	PSA3-FT-38860	
16	01	1	A	01HSS	7	1	Reducer Concentric BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	J0043-1	1724000839	00380	PSA3-FT-38860	
16	01	1	A	01HSS	8	1	Reducer Concentric BW ›2"x1.1/2" Thk.2.77mmx3.68mm ASTM A403 Gr.WP316/316L	LN007-1	1724001267	00340	PSA3-FT-49115	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
16	01	1	A	01HSS	10	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724001267	00130	1673F/23-24-21	
16	01	1	A	01HSS	11	1	Flange WN ›3/4" Thk.2.87mm 150LB RF ASTM A182 Gr.F316/316L	CH-18532	1724000839	00950	EXP/22-23/01571-30	
16	01	1	A	01HSS	11	1	Flange WN ›3/4" Thk.2.87mm 150LB RF ASTM A182 Gr.F316/316L	CH-18532	1724000839	00950	EXP/22-23/01571-30	
16	01	1	A	01HSS	11	1	Flange WN ›3/4" Thk.2.87mm 150LB RF ASTM A182 Gr.F316/316L	CH-18532	1724000839	00950	EXP/22-23/01571-30	
16	01	1	A	01HSS	1C	0,156	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
16	01	1	A	01HSS	1D	1,347	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
16	01	1	B	01HSS	4	1	Tee Reducing BW ›2"x3/4" Thk.2.77mmx2.87mm ASTM A403 Gr.WP316/316L	221008AS16	1724000839	00580	10303342	
16	01	1	B	01HSS	6	1	Tee Reducing BW ›1.1/2"x3/4" Thk.3.68mmx2.87mm ASTM A403 Gr.WP316/316L	12B258	1724000839	00610	10303342	
16	01	1	B	01HSS	8	1	Reducer Concentric BW ›2"x1.1/2" Thk.2.77mmx3.68mm ASTM A403 Gr.WP316/316L	LN007-1	1724001267	00340	PSA3-FT-49115	
16	01	1	B	01HSS	9	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
16	01	1	B	01HSS	10	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724001267	00130	1673F/23-24-21	
16	01	1	B	01HSS	11	1	Flange WN ›3/4" Thk.2.87mm 150LB RF ASTM A182 Gr.F316/316L	CH-18532	1724000839	00950	EXP/22-23/01571-30	
16	01	1	B	01HSS	11	1	Flange WN ›3/4" Thk.2.87mm 150LB RF ASTM A182 Gr.F316/316L	CH-18532	1724000839	00950	EXP/22-23/01571-30	
16	01	1	B	01HSS	1A	0,36	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
16	01	1	B	01HSS	2B	0,161	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
16	03	2	C	01HSS	6	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
16	03	2	C	01HSS	6	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
16	03	2	C	01HSS	6	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
16	03	2	C	01HSS	1E	2,149	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
16	03	2	C	01HSS	1F	6	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
16	03	2	C	01HSS	1G	1,587	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
16	03	2	D	01HSS	2	1	Tee Reducing BW ›2"x3/4" Thk.2.77mmx2.87mm ASTM A403 Gr.WP316/316L	221008AS16	1724000839	00580	10303342	
16	03	2	D	01HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
16	03	2	D	01HSS	6	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
16	03	2	D	01HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
16	03	2	D	01HSS	6	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
16	03	2	D	01HSS	1H	4,059	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
16	03	2	E	01HSS	3	1	Tee Reducing BW ›2"x1" Thk.2.77mmx3.38mm ASTM A403 Gr.WP316/316L	N220713AT01	1724000839	00590	10303342	
16	03	2	E	01HSS	6	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
16	03	2	E	01HSS	6	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
16	03	2	E	01HSS	7	1	Flange WN ›2" Thk.2.77mm 150LB RF ASTM A182 Gr.F316/316L	DJ836	1724000839	00910	1000028548/52 REV.1	
16	03	2	E	01HSS	1I	2,175	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
16	03	2	E	01HSS	1J	0,122	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
16	03	2	E	01HSS	1K	0,2	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
16	03	2	E	01HSS	1M	0,22	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
16	03	2	F	01HSS	4	1	Reducer Concentric BW ›2"x1.1/4" Thk.2,77mmx2,77mm ASTM A403 Gr.WP316/316L	MR211002	1724000839	00410	22-09-1078	
16	03	2	F	01HSS	7	1	Flange WN ›2" Thk.2.77mm 150LB RF ASTM A182 Gr.F316/316L	DJ836	1724000839	00910	1000028548/52 REV.1	
16	03	2	F	01HSS	8	1	Flange WN ›1.1/4" Thk.2,77mm 300LB RF ASTM A182 Gr.F316/316L	13/555	1724001828	00080	EXP/0000-18/2013-14	
16	03	2	F	01HSS	1L	0,192	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
17	01	1	A	03HSS	1	1	Reducer Concentric BW ›3"x1.1/2" Thk.3.05mmx3.68mm ASTM A403 Gr.WP316/316L	1074624	1724000839	00360	1074624	
17	01	1	A	03HSS	3	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724001267	00130	1673F/23-24-21	
17	01	1	B	03HSS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	1163621	1724000839	00390	1163621	
17	01	1	B	03HSS	3	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724001267	00130	1673F/23-24-21	
17	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
18	01	1	A	01HSS	2	1	Reducer Eccentric BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	MR230757	1724000839	00440	MCP2401-00015-17	
18	01	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
18	01	1	A	01HSS	4	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
18	01	1	A	01HSS	5	1	Flange WN ›2" Thk.2.77mm 150LB RF ASTM A182 Gr.F316/316L	DJ836	1724000839	00910	1000028548/52 REV.1	
18	01	1	A	01HSS	1A	0,308	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
18	01	1	A	01HSS	STD C-40	1	PAD - STD C-40	NJ113	1724000839	00080	462	
18	01	1	B	01HSS	4	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
18	01	1	B	01HSS	1B	1,057	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
18	01	1	C	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
18	01	1	C	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
18	01	1	C	01HSS	1C	3,452	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
18	01	1	C	01HSS	1D	0,205	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
19	01	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
19	01	1	A	03HSS	3	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
19	01	1	A	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
19	01	1	A	03HSS	1A	0,241	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
19	01	1	A	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
19	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
19	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
19	01	1	B	03HSS	1B	0,173	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
19	01	1	C	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
19	01	1	C	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
19	01	1	C	03HSS	1C	0,15	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
19	01	1	C	03HSS	1D	0,6	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
19	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
19	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
19	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
19	01	1	D	03HSS	1E	0,5	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
19	01	1	D	03HSS	1F	1,625	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
19	01	1	D	03HSS	1G	0,158	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
20	00	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
20	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
20	00	1	A	03HSS	1A	0,79	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
20	00	1	A	03HSS	1B	0,087	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
23	00	1	A	01SD	8	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724001267	00060	1023SA024	
23	00	1	A	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
23	00	1	A	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
23	00	1	A	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
23	00	1	A	01SD	1A	0,121	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
23	00	1	B	01SD	4	1	Tee Reducing BW ›1.1/2"x1" Thk.3,68mmx3,38mm ASTM A815 UNS S32760	1005SA022	1724000839	00520	1005SA022	
23	00	1	B	01SD	4	1	Tee Reducing BW ›1.1/2"x1" Thk.3,68mmx3,38mm ASTM A815 UNS S32760	1005SA022	1724000839	00520	1005SA022	
23	00	1	B	01SD	5	1	Tee BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1157SA019	1724000839	00450	1157SA019	
23	00	1	B	01SD	5	1	Tee BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1157SA019	1724000839	00450	1157SA019	
23	00	1	B	01SD	7	1	Reducer Concentric BW ›2"x1.1/2" Thk.2,77mmx3,68mm ASTM A815 UNS S32760	1018SA019	1724000839	00320	1018SA019	
23	00	1	B	01SD	8	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724001267	00060	1023SA024	
23	00	1	B	01SD	9	1	Flange WN ›2" Thk.2.77mm 150LB RF ASTM A182 Gr.F55	555304	1724000839	00880	770	
23	00	1	B	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
23	00	1	B	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
23	00	1	B	01SD	11	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
23	00	1	B	01SD	11	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
23	00	1	B	01SD	1B	0,236	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
23	00	1	B	01SD	1C	0,114	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
23	00	1	B	01SD	1E	0,25	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
23	00	1	B	01SD	1F	0,15	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
23	00	1	B	01SD	2D	0,121	Pipe 33.4mm(1") thk.3.38mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
23	00	1	C	01SD	6	1	Tee Reducing BW ›1.1/2"x3/4" Thk.3,68mmx2,87mm ASTM A815 UNS S32760	1181SA05	1724000839	00510	1181SA05	
23	00	1	C	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
23	00	1	C	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
23	00	1	C	01SD	12	1	Flange WN ›3/4" Thk.2,87mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00890	770	
23	00	1	C	01SD	3G	0,1	Pipe 26.7mm(3/4") thk.2,87mm ASTM A790 UNS S32760	739859	1724000839	00030	4-24-00368-REV.01	
23	00	1	D	01SD	4	1	Tee Reducing BW ›1.1/2"x1" Thk.3,68mmx3,38mm ASTM A815 UNS S32760	1005SA022	1724000839	00520	1005SA022	
23	00	1	D	01SD	8	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724001267	00060	1023SA024	
23	00	1	D	01SD	8	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724001267	00060	1023SA024	
23	00	1	D	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
23	00	1	D	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
23	00	1	D	01SD	11	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
23	00	1	D	01SD	1H	0,25	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
25	00	1	A	01SD	8	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724000839	00250	1023SA024	
25	00	1	A	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
25	00	1	A	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
25	00	1	A	01SD	1A	0,12	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
25	00	1	B	01SD	4	1	Tee Reducing BW ›1.1/2"x1" Thk.3,68mmx3,38mm ASTM A815 UNS S32760	1005SA022	1724000839	00520	1005SA022	
25	00	1	B	01SD	4	1	Tee Reducing BW ›1.1/2"x1" Thk.3,68mmx3,38mm ASTM A815 UNS S32760	1005SA022	1724000839	00520	1005SA022	
25	00	1	B	01SD	5	1	Tee BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1157SA019	1724000839	00450	1157SA019	
25	00	1	B	01SD	5	1	Tee BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1157SA019	1724000839	00450	1157SA019	
25	00	1	B	01SD	7	1	Reducer Concentric BW ›2"x1.1/2" Thk.2,77mmx3,68mm ASTM A815 UNS S32760	1018SA019	1724000839	00320	1018SA019	
25	00	1	B	01SD	8	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724000839	00250	1023SA024	
25	00	1	B	01SD	9	1	Flange WN ›2" Thk.2.77mm 150LB RF ASTM A182 Gr.F55	555304	1724000839	00880	770	
25	00	1	B	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
25	00	1	B	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
25	00	1	B	01SD	11	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
25	00	1	B	01SD	12	1	Flange WN For Jackscrews ›1" Thk.3,38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	01150	770	
25	00	1	B	01SD	1B	0,115	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
25	00	1	B	01SD	1D	0,25	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
25	00	1	B	01SD	1E	0,164	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
25	00	1	B	01SD	2C	0,132	Pipe 33.4mm(1") thk.3.38mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
25	00	1	C	01SD	6	1	Tee Reducing BW ›1.1/2"x3/4" Thk.3,68mmx2,87mm ASTM A815 UNS S32760	1181SA05	1724000839	00510	1181SA05	
25	00	1	C	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
25	00	1	C	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
25	00	1	C	01SD	13	1	Flange WN ›3/4" Thk.2,87mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00890	770	
25	00	1	C	01SD	3F	0,1	Pipe 26.7mm(3/4") thk.2,87mm ASTM A790 UNS S32760	739859	1724000839	00030	4-24-00368-REV.01	
25	00	1	D	01SD	4	1	Tee Reducing BW ›1.1/2"x1" Thk.3,68mmx3,38mm ASTM A815 UNS S32760	1005SA022	1724000839	00520	1005SA022	
25	00	1	D	01SD	8	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724000839	00250	1023SA024	
25	00	1	D	01SD	4	1	Tee Reducing BW ›1.1/2"x1" Thk.3,68mmx3,38mm ASTM A815 UNS S32760	1005SA022	1724000839	00520	1005SA022	
25	00	1	D	01SD	8	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724000839	00250	1023SA024	
25	00	1	D	01SD	8	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724000839	00250	1023SA024	
25	00	1	D	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
25	00	1	D	01SD	10	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
25	00	1	D	01SD	11	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
25	00	1	D	01SD	1G	0,25	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
26	00	1	A	01SD	2	1	Tee Reducing BW ›1.1/2"x3/4" Thk.3,68mmx2,87mm ASTM A815 UNS S32760	1181SA05	1724000839	00510	1181SA05	
26	00	1	A	01SD	3	1	Tee BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1157SA019	1724001828	00270	1157SA019	
26	00	1	A	01SD	3	1	Tee BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1157SA019	1724001828	00270	1157SA019	
26	00	1	A	01SD	4	1	Cap BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1016SA019	1724000839	00170	1016SA019	
26	00	1	A	01SD	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A790 UNS S32760	TL6	1724001267	00250	003817	
26	00	1	A	01SD	1D	1,339	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
26	00	1	A	01SD	1H	2,299	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
26	00	1	B	01SD	6	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724000839	00250	1023SA024	
26	00	1	B	01SD	6	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724000839	00250	1023SA024	
26	00	1	B	01SD	7	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
26	00	1	B	01SD	1A	0,097	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
26	00	1	B	01SD	1B	0,314	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
26	00	1	B	01SD	1C	1,127	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
26	00	1	C	01SD	6	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724000839	00250	1023SA024	
26	00	1	C	01SD	6	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724000839	00250	1023SA024	
26	00	1	C	01SD	7	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
26	00	1	C	01SD	1E	0,097	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
26	00	1	C	01SD	1F	0,314	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
26	00	1	C	01SD	1G	1,127	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
26	00	2	D	01SD	3	1	Tee Reducing BW ›1.1/2"x1" Thk.3,68mmx3,38mm ASTM A815 UNS S32760	1005SA022	1724000839	00520	1005SA022	
26	00	2	D	01SD	4	1	Tee Reducing BW ›1.1/2"x3/4" Thk.3,68mmx2,87mm ASTM A815 UNS S32760	1181SA05	1724000839	00510	1181SA05	
26	00	2	D	01SD	5	1	NipoFlange Reinforced ›4"x1.1/2" Thk.3,05mmx3,68mm 150LB RF ASTM A182 Gr.F55	712578	1724001267	00280	24C0357/02	
26	00	2	D	01SD	6	1	Reducer Eccentric BW ›4"x1.1/2" Thk.3,05mmx3,68mm ASTM A815 UNS S32760	1127SA03	1724000839	00420	1127SA03	
26	00	2	D	01SD	6	1	Reducer Eccentric BW ›4"x1.1/2" Thk.3,05mmx3,68mm ASTM A815 UNS S32760	1127SA03	1724000839	00420	1127SA03	
26	00	2	D	01SD	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724000839	00250	1023SA024	
26	00	2	D	01SD	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724000839	00250	1023SA024	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by		
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:		
Project	**Hollandse Kust Noord Wind Park Project**			
Job	**123A90**			
Discipline	**PIPING**			
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
26	00	2	D	01SD	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724000839	00250	1023SA024	
26	00	2	D	01SD	9	1	Flange WN ›3/4" Thk.2,87mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00890	770	
26	00	2	D	01SD	1K	0,25	Pipe 114.3mm(4") thk.3.05mm ASTM A790 UNS S32760	59571	1724000839	00020	745216	
26	00	2	D	01SD	2I	1,606	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
26	00	2	D	01SD	2J	1,854	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
26	00	2	D	01SD	2L	0,283	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
26	00	2	E	01SD	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3,68mm ASTM A815 UNS S32760	1023SA024	1724000839	00250	1023SA024	
26	00	2	E	01SD	8	1	Flange WN ›1.1/2" Thk.3,68mm 150LB RF ASTM A182 Gr.F55	E170081	1724000839	00900	770	
26	00	2	E	01SD	2M	1,453	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
26	00	2	E	01SD	2N	0,174	Pipe 48.3mm(1.1/2") thk.3,68mm ASTM A790 UNS S32760	556787	1724000839	00040	A/198-847363	
27	00	1	A	01CS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	32-J9K6232	1724000839	00740	4527-P9	
27	00	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
27	00	1	A	01CS	4	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	
27	00	1	A	01CS	1A	0,194	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
27	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
27	00	1	B	01CS	1B	0,78	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
29	02	1	A	01CS	2	1	Reducer Eccentric BW ›3"x2" Thk.5.49mmx5.54mm ASTM/ASME A/SA420 Gr.WPL6	OK3882	1724001267	00360	5924-P5	
29	02	1	A	01CS	3	1	Reducer Eccentric BW ›2"x1" Thk.5.54mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	J1L8480	1724001267	00370	5924-P4	
29	02	1	A	01CS	4	1	Flange WN ›3" Thk.5.49mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70167	1724001267	00100	2924-C_MFF-01793	
29	02	1	A	01CS	8	1	90 Deg Elbow Long Radius BW ›2" Thk.5.54mm ASTM/ASME A/SA420 Gr.WPL6	774	1724000839	00670	4527-P2	
29	02	1	A	01CS	8	1	90 Deg Elbow Long Radius BW ›2" Thk.5.54mm ASTM/ASME A/SA420 Gr.WPL6	774	1724000839	00670	4527-P2	
29	02	1	A	01CS	9	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
29	02	1	A	01CS	9	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
29	02	1	A	01CS	1A	0,129	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
29	02	1	A	01CS	9	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
29	02	1	A	01CS	1A	0,129	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
29	02	1	B	01CS	10	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
29	00	2	C	01CS	1E	0,544	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
29	00	2	C	01CS	1F	3,579	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
29	00	2	C	01CS	1G	10,273	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
29	00	2	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
29	00	2	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
29	00	2	C	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
30	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
30	00	1	A	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
30	00	1	A	01CS	1A	0,921	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
30	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
30	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
30	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
30	00	1	B	01CS	1B	0,999	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
30	00	1	B	01CS	1C	0,6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
30	00	1	B	01CS	1D	5,426	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
30	00	2	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
30	00	2	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
30	00	2	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
30	00	2	C	01CS	1E	0,272	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
30	00	2	C	01CS	1F	4,496	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
30	00	2	D	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
30	00	2	D	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
30	00	2	D	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
30	00	2	D	01CS	1G	0,175	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
30	00	2	D	01CS	1H	5,943	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
30	00	2	D	01CS	1I	0,921	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
30	00	2	E	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
30	00	2	E	01CS	1J	5,351	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
30	00	3	F	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
30	00	3	F	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
30	00	3	F	01CS	1K	0,527	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
30	00	3	G	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
30	00	3	G	01CS	1L	0,581	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
30	00	3	G	01CS	1M	2,904	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
30	00	3	H	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
30	00	3	H	01CS	1N	1,349	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
31	00	1	A	01CS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	54	1724001828	00290	8055-P4	
31	00	1	A	01CS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	54	1724001828	00290	8055-P4	
31	00	1	A	01CS	5	1	Cap BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	16I	1724001828	00010	8055-P1	
31	00	1	A	01CS	1A	3,289	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	00	1	A	01CS	1B	6	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	00	1	B	01CS	3	1	Tee BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	0D	1724001828	00260	8055-P2	
31	00	1	B	01CS	4	1	Reducer Concentric BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	32	1724001267	00310	5924-P3	
31	00	1	B	01CS	7	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
31	00	1	B	01CS	1C	6	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	00	1	B	01CS	1D	4,76	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	00	1	B	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
31	00	1	B	01CS	1F	0,1	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	00	1	C	01CS	6	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	
31	00	1	C	01CS	6	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	
31	00	1	C	01CS	6	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	
31	00	1	C	01CS	1G	2,321	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	00	1	C	01CS	1H	3,925	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	02	2	D	01CS	3	1	Tee Reducing BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	54	1724001828	00290	8055-P4	
31	00	1	C	01CS	1H	3,925	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	02	2	D	01CS	3	1	Tee Reducing BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	54	1724001828	00290	8055-P4	
31	02	2	D	01CS	4	1	Tee Reducing BW ›1.1/2"x3/4" Thk.5,08mmx3,91mm ASTM/ASME A/SA420 Gr.WPL6	14E	1724001828	00280	8055-P3	
31	02	2	D	01CS	5	1	NipoFlange Reinforced ›4"x1.1/2" Thk.6,02mmx5,08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	T24617	1724001267	00270	24C0357/01	
31	02	2	D	01CS	6	1	Reducer Eccentric BW ›4"x1.1/2" Thk.6.02mmx5.08mm ASTM/ASME A/SA420 Gr.WPL6	513131	1724000839	00770	4527-P12	
31	02	2	D	01CS	6	1	Reducer Eccentric BW ›4"x1.1/2" Thk.6.02mmx5.08mm ASTM/ASME A/SA420 Gr.WPL6	513131	1724001828	00130	8055-P5	
31	02	2	D	01CS	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724002052	00010	9083-P1	
31	02	2	D	01CS	8	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	
31	02	2	D	01CS	8	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	
31	02	2	D	01CS	9	1	Flange WN ›3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01210	2024-C_MFF-01243	
31	02	2	D	01CS	24	1	Tee BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	OD	1724002052	00020	9083-P2	
31	02	2	D	01CS	1J	0,271	Pipe 114.3mm(4") thk.6.02mm ASTM/ASME A/SA333 Gr.6	1234140	1724000995	00020	24A2347	
31	02	2	D	01CS	2I	0,212	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	02	2	D	01CS	2Q	0,15	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	02	2	E	01CS	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	
31	02	2	E	01CS	8	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	
31	02	2	F	01CS	8	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	
31	02	2	F	01CS	2L	0,726	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	02	2	I	01CS	8	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	
31	02	2	I	01CS	8	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	
31	02	2	I	01CS	2K	0,359	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	02	2	J	01CS	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	
31	02	2	J	01CS	8	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	
31	02	2	J	01CS	2P	0,4	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	00	3	G	01CS	2	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	
31	00	3	G	01CS	3	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	
31	00	3	G	01CS	1M	0,524	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	00	3	H	01CS	2	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	
31	00	3	H	01CS	1N	3,678	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
31	00	3	H	01CS	1O	1,308	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
32	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
32	00	1	A	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
32	00	1	A	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
32	00	1	A	01CS	1A	0,4	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
32	00	1	A	01CS	1B	0,115	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
32	00	1	A	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
32	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
32	00	1	B	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
32	00	1	B	01CS	1C	1,236	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
32	00	1	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
32	00	1	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
32	00	1	C	01CS	1D	0,508	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
32	00	1	C	01CS	1E	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
32	00	1	C	01CS	1F	5,237	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
32	00	1	D	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
32	00	1	D	01CS	1G	0,955	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
33	00	1	A	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	
33	00	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
33	00	1	A	01CS	4	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
33	00	1	A	01CS	1B	4,153	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
33	00	1	B	01CS	4	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
33	00	1	B	01CS	1A	0,646	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
33	00	1	C	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
33	00	1	C	01CS	1C	5,716	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
33	00	1	D	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	
33	00	1	D	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
33	00	1	D	01CS	4	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
33	00	1	D	01CS	1D	3,071	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
33	00	1	D	01CS	1F	0,748	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
33	00	1	E	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
33	00	1	E	01CS	1G	0,971	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
33	00	1	F	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
33	00	1	F	01CS	1H	0,58	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
33	00	1	G	01CS	4	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
33	00	1	G	01CS	1I	0,399	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
33	00	1	H	01CS	4	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
33	00	1	H	01CS	1J	0,35	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	1	A	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	
34	00	1	A	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	
34	00	1	A	01CS	3	1	Tee Reducing BW ›1"x3/4" Thk.4.55mmx3.91mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00800	4527-P15	
34	00	1	A	01CS	3	1	Tee Reducing BW ›1"x3/4" Thk.4.55mmx3.91mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00800	4527-P15	
34	00	1	A	01CS	3	1	Tee Reducing BW ›1"x3/4" Thk.4.55mmx3.91mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00800	4527-P15	
34	00	1	A	01CS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
34	00	1	A	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
34	00	1	A	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
34	00	1	A	01CS	6	1	Flange WN ›3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01210	2024-C_MFF-01243	
34	00	1	A	01CS	6	1	Flange WN ›3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01210	2024-C_MFF-01243	
34	00	1	A	01CS	6	1	Flange WN ›3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01210	2024-C_MFF-01243	
34	00	1	A	01CS	1A	0,096	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	1	A	01CS	1B	0,451	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	1	A	01CS	1C	0,06	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	1	A	01CS	1D	0,2	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	1	A	01CS	1E	0,199	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	1	A	01CS	1F	0,094	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	1	B	01CS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
34	00	1	B	01CS	1G	4,346	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	1	B	01CS	1H	0,124	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	2	C	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
34	00	2	C	01CS	1I	2,955	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	2	D	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
34	00	2	D	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
34	00	2	D	01CS	1J	0,224	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	2	D	01CS	1K	3,574	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	2	E	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
34	00	2	E	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
34	00	2	E	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
34	00	2	E	01CS	1L	0,324	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	2	E	01CS	1M	1,724	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	2	F	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	
34	00	2	F	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	
34	00	2	F	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
34	00	2	F	01CS	4	1	Flange WN ›1" Thk.4.55mm 300LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01240	2024-C_MFF-01243	
34	00	2	F	01CS	1N	1,662	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	2	F	01CS	1O	0,1	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	2	F	01CS	1P	0,1	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
34	00	2	F	01CS	1Q	0,138	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
35	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
35	00	1	A	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
35	00	1	A	01CS	1A	0,184	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
35	00	1	A	01CS	1B	0,244	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
35	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
35	00	1	B	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
35	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
35	00	1	B	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
35	00	1	B	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
35	00	1	B	01CS	1C	0,312	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
35	00	1	C	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
35	00	1	C	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
35	00	1	C	01CS	1D	0,259	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
35	00	1	C	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
36	00	1	A	01SS	2	1	Tee BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	66HSJ128	1724000839	00490	T202318004128	
36	00	1	A	01SS	4	1	Reducer Eccentric BW ›2"x1.1/2" Thk.2.77mmx3.68mm ASTM A403 Gr.WP316/316L	MN086-1	1724001267	00380	PSA3-FT-49124	
36	00	1	A	01SS	5	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	1	A	01SS	6	1	Flange WN ›2" Thk.2.77mm 150LB RF ASTM A182 Gr.F316/316L	DJ836	1724000839	00910	1000028548/52 REV.1	
36	00	1	A	01SS	7	1	Flange WN ›1.1/2" Thk.3.68mm 150LB RF ASTM A182 Gr.F316/316L	CH-17777	1724000839	00970	EXP/22-23/00790-12	
36	00	1	A	01SS	1A	0,3	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	1	A	01SS	1BD	0,155	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	1	B	01SS	3	1	Tee Reducing BW ›1.1/2"x3/4" Thk.3.68mmx2.87mm ASTM A403 Gr.WP316/316L	E61718	1724001267	00410	JNDIA2023-GW517-08	
36	00	1	B	01SS	3	1	Tee Reducing BW ›1.1/2"x3/4" Thk.3.68mmx2.87mm ASTM A403 Gr.WP316/316L	E61718	1724001267	00410	JNDIA2023-GW517-08	
36	00	1	B	01SS	5	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	1	B	01SS	7	1	Flange WN ›1.1/2" Thk.3.68mm 150LB RF ASTM A182 Gr.F316/316L	CH-17777	1724000839	00970	EXP/22-23/00790-12	
36	00	1	B	01SS	8	1	Flange WN ›3/4" Thk.2.87mm 150LB RF ASTM A182 Gr.F316/316L	CH-18532	1724000839	00950	EXP/22-23/01571-30	
36	00	1	B	01SS	8	1	Flange WN ›3/4" Thk.2.87mm 150LB RF ASTM A182 Gr.F316/316L	CH-18532	1724000839	00950	EXP/22-23/01571-30	
36	00	1	B	01SS	1B	0,275	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	1	B	01SS	1C	0,15	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	1	B	01SS	1D	0,15	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	1	B	01SS	1E	1,852	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	1	C	01SS	5	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	1	C	01SS	5	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	1	C	01SS	5	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	1	C	01SS	1F	0,454	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	1	C	01SS	1G	0,191	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	1	C	01SS	1H	6	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	1	C	01SS	1I	3,15	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	2	D	01SS	2	1	Tee BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	66HSJ128	1724000839	00490	T202318004128	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
36	00	2	D	01SS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	2	D	01SS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	2	D	01SS	1J	0,306	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	2	D	01SS	1K	6	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	2	D	01SS	1L	5,618	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	2	E	01SS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	2	E	01SS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	2	E	01SS	1M	0,121	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	2	E	01SS	1N	1,863	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	2	E	01SS	1O	4,819	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	3	G	01SS	4	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	3	G	01SS	1P	5,176	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	3	H	01SS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	3	H	01SS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	3	H	01SS	1Q	1,171	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	3	H	01SS	1R	3,886	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	3	I	01SS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	3	I	01SS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	3	I	01SS	3	1	Cap BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	1014684	1724000839	00200	1014684	
36	00	3	I	01SS	1S	3,885	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	3	I	01SS	1T	3,42	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	4	F	01SS	2	1	Tee BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	66HSJ128	1724000839	00490	T202318004128	
36	00	4	F	01SS	5	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	4	F	01SS	5	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	4	F	01SS	5	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	4	F	01SS	1U	4,636	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	4	F	01SS	1V	0,485	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	4	J	01SS	3	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	4	J	01SS	3	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	4	J	01SS	4	1	Cap BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	1014684	1724000839	00200	1014684	
36	00	4	J	01SS	1W	1,347	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	4	J	01SS	1X	6	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	4	J	01SS	1Y	1,386	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	5	K	01SS	2	1	Tee BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	66HSJ128	1724000839	00490	T202318004128	
36	00	5	K	01SS	2	1	Tee BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	66HSJ128	1724000839	00490	T202318004128	
36	00	5	K	01SS	3	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	5	K	01SS	5	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
36	00	5	K	01SS	1AB	3,884	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	5	K	01SS	1AM	0,931	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	5	K	01SS	1AS	0,414	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	5	K	01SS	1Z	6	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	5	L	01SS	4	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	5	L	01SS	4	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	5	L	01SS	1AC	0,121	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	5	L	01SS	1AD	1,613	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	5	L	01SS	1AE	1,789	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	6	M	01SS	2	1	Tee BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	66HSJ128	1724000839	00490	T202318004128	
36	00	6	M	01SS	5	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	6	M	01SS	5	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	6	M	01SS	1AH	3,696	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	6	M	01SS	1AI	0,892	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	6	N	01SS	3	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	6	N	01SS	4	1	Cap BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	1014684	1724000839	00200	1014684	
36	00	6	N	01SS	5	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	6	N	01SS	1AF	0,1	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	6	N	01SS	1AG	3,563	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
36	00	6	O	01SS	3	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	6	O	01SS	3	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	6	O	01SS	4	1	Cap BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	1014684	1724000839	00200	1014684	
36	00	6	O	01SS	1AJ	3,619	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	6	O	01SS	1AK	3,71	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	6	O	01SS	1AL	0,557	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	7	P	01SS	2	1	Tee Reducing BW ›1.1/2"x3/4" Thk.3.68mmx2.87mm ASTM A403 Gr.WP316/316L	E61718	1724001267	00410	JNDIA2023-GW517-08	
36	00	7	P	01SS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
36	00	7	P	01SS	6	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	7	P	01SS	6	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	7	P	01SS	6	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	7	P	01SS	1AN	0,121	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	7	P	01SS	1AO	0,178	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	7	P	01SS	1AP	2,718	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	7	Q	01SS	2	1	Tee Reducing BW ›1.1/2"x3/4" Thk.3.68mmx2.87mm ASTM A403 Gr.WP316/316L	E61718	1724001267	00410	JNDIA2023-GW517-08	
36	00	7	Q	01SS	3	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	7	Q	01SS	3	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	7	Q	01SS	4	1	Cap BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	1014684	1724000839	00200	1014684	
36	00	7	Q	01SS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
36	00	7	Q	01SS	1AQ	0,694	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	7	Q	01SS	1AR	3,344	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	8	R	01SS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	8	R	01SS	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	8	R	01SS	1AT	1,653	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	8	R	01SS	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	8	R	01SS	1AU	0,586	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	8	R	01SS	1AV	6	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	8	R	01SS	1AW	1,429	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	8	S	01SS	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	8	S	01SS	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	8	S	01SS	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	8	S	01SS	1AX	0,286	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	8	S	01SS	1AY	0,598	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	8	S	01SS	1AZ	2,291	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	8	T	01SS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
36	00	8	T	01SS	3	1	Tee BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	66HSJ128	1724000839	00490	T202318004128	
36	00	8	T	01SS	4	1	Tee Reducing BW ›1.1/2"x3/4" Thk.3.68mmx2.87mm ASTM A403 Gr.WP316/316L	E61718	1724001267	00410	JNDIA2023-GW517-08	
36	00	8	T	01SS	5	1	Cap BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	1014684	1724000839	00200	1014684	
36	00	8	T	01SS	6	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
36	00	8	T	01SS	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	8	T	01SS	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
36	00	8	T	01SS	1BA	0,837	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	8	T	01SS	1BB	0,55	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
36	00	8	T	01SS	1BC	1,572	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
37	01	1	A	01HSS	2	1	Reducer Eccentric BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	MR230757	1724000839	00440	MCP2401-00015-17	
37	01	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
37	01	1	A	01HSS	4	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
37	01	1	A	01HSS	5	1	Flange WN ›2" Thk.2.77mm 150LB RF ASTM A182 Gr.F316/316L	DJ836	1724000839	00910	1000028548/52 REV.1	
37	01	1	A	01HSS	1A	0,495	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
37	01	1	A	01HSS	STD C-40	1	PAD - STD C-40	NJ113	1724000839	00080	462	
37	01	1	B	01HSS	4	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
37	01	1	B	01HSS	1B	1,012	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
37	01	1	C	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
37	01	1	C	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
37	01	1	C	01HSS	1C	3,454	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
37	01	1	C	01HSS	1D	0,392	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
38	01	1	A	01HSS	2	1	Reducer Eccentric BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	MR230757	1724000839	00440	MCP2401-00015-17	
38	01	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
38	01	1	A	01HSS	4	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
38	01	1	A	01HSS	5	1	Flange WN ›2" Thk.2.77mm 150LB RF ASTM A182 Gr.F316/316L	DJ836	1724000839	00910	1000028548/52 REV.1	
38	01	1	A	01HSS	1A	0,495	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
38	01	1	A	01HSS	STD C-40	1	PAD - STD C-40	NJ113	1724000839	00080	462	
38	01	1	B	01HSS	4	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
38	01	1	B	01HSS	1B	0,972	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
38	01	1	C	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
38	01	1	C	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
38	01	1	C	01HSS	1C	3,454	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
38	01	1	C	01HSS	1D	0,392	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
39	01	1	A	01HSS	2	1	Reducer Eccentric BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	YX1906-526	1724000839	00440	10303342	
39	01	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
39	01	1	A	01HSS	4	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
39	01	1	A	01HSS	5	1	Flange WN ›2" Thk.2.77mm 150LB RF ASTM A182 Gr.F316/316L	DJ836	1724000839	00910	1000028548/52 REV.1	
39	01	1	A	01HSS	1A	0,495	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
39	01	1	A	01HSS	STD C-40	1	PAD - STD C-40	NJ113	1724000839	00080	462	
39	01	1	B	01HSS	4	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
39	01	1	B	01HSS	1B	0,972	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
39	01	1	C	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
39	01	1	C	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
39	01	1	C	01HSS	1C	3,454	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
39	01	1	C	01HSS	1D	0,392	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
40	01	1	A	01HSS	2	1	Reducer Eccentric BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	MR230757	1724000839	00440	MCP2401-00015-17	
40	01	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
40	01	1	A	01HSS	4	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
40	01	1	B	01HSS	4	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
40	01	1	A	01HSS	1A	0,495	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
40	01	1	A	01HSS	STD C-40	1	PAD - STD C-40	NJ113	1724000839	00080	462	
40	01	1	A	01HSS	5	1	Flange WN ›2" Thk.2.77mm 150LB RF ASTM A182 Gr.F316/316L	DJ836	1724000839	00910	1000028548/52 REV.1	
40	01	1	B	01HSS	1B	1,012	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
40	01	1	C	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
40	01	1	C	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
40	01	1	C	01HSS	1C	3,454	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
40	01	1	C	01HSS	1D	0,392	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
41	01	1	A	01HSS	2	1	Reducer Eccentric BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	MR230757	1724000839	00440	MCP2401-00015-17	
41	01	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
41	01	1	A	01HSS	4	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
41	01	1	A	01HSS	5	1	Flange WN ›2" Thk.2.77mm 150LB RF ASTM A182 Gr.F316/316L	DJ836	1724000839	00910	1000028548/52 REV.1	
41	01	1	A	01HSS	1A	0,608	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
41	01	1	A	01HSS	STD C-40	1	PAD - STD C-40	NJ113	1724000839	00080	462	
41	01	1	B	01HSS	4	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
41	01	1	B	01HSS	1B	1,052	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
41	01	1	C	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
41	01	1	C	01HSS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
41	01	1	C	01HSS	1C	3,454	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
41	01	1	C	01HSS	1D	0,505	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
42	01	1	A	01HSS	2	1	Tee Reducing BW ›10"x6" Thk.4.19mmx3.4mm ASTM A403 Gr.WP316/316L	EF1761	1724000839	00600	JNDIA2023-GW1282-01	
42	01	1	A	01HSS	2	1	Tee Reducing BW ›10"x6" Thk.4.19mmx3.4mm ASTM A403 Gr.WP316/316L	EF1761	1724000839	00600	JNDIA2023-GW1282-01	
42	01	1	A	01HSS	2	1	Tee Reducing BW ›10"x6" Thk.4.19mmx3.4mm ASTM A403 Gr.WP316/316L	EF1761	1724000839	00600	JNDIA2023-GW1282-01	
42	01	1	A	01HSS	3	1	Weldolet BW ›10"x2" Thk.4.19mmx2.77mm ASTM A182 Gr.F316/316L	BAJV	1724000839	00130	TC-030146-23	
42	01	1	A	01HSS	4	1	Cap BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	51856	1724000839	00180	51856	
42	01	1	A	01HSS	5	1	90 Deg Elbow Long Radius BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	M230630	1724000839	00310	MCP2310-00002-18	
42	01	1	A	01HSS	1A	3,568	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
42	01	1	A	01HSS	1B	3,473	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
42	01	1	A	01HSS	STD C-40	1	PAD - STD C-40	VCC062015	1724000839	00100	230320P007	
42	02	2	B	01HSS	2	1	Tee Reducing BW ›10"x6" Thk.4.19mmx3.4mm ASTM A403 Gr.WP316/316L	EF1761	1724000839	00600	JNDIA2023-GW1282-01	
42	02	2	B	01HSS	3	1	Tee BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	INA004-03-103T	1724000839	00500	PSA3-FT-42478	
42	02	2	B	01HSS	4	1	Weldolet BW ›10"x1" Thk.4.19mmx3.38mm ASTM A182 Gr.F316/316L	BAKV	1724000839	00150	TC-029860-23-0001	
42	02	2	B	01HSS	6	1	90 Deg Elbow Long Radius BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	M230630	1724000839	00310	MCP2310-00002-18	
42	02	2	B	01HSS	1C	1,249	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
42	02	2	B	01HSS	1D	3,769	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
42	02	2	B	01HSS	1E	1,877	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
42	02	2	B	01HSS	STD C-40	1	PAD - STD C-40	VCC062015	1724000839	00100	230320P007	
42	02	2	C	01HSS	4	1	Weldolet BW ›10"x1" Thk.4.19mmx3.38mm ASTM A182 Gr.F316/316L	BAKV	1724000839	00150	TC-029860-23-0001	
42	02	2	C	01HSS	4	1	Weldolet BW ›10"x1" Thk.4.19mmx3.38mm ASTM A182 Gr.F316/316L	BAKV	1724000839	00150	TC-029860-23-0001	
42	02	2	C	01HSS	5	1	Weldolet BW ›10"x2" Thk.4.19mmx2.77mm ASTM A182 Gr.F316/316L	BAJV	1724000839	00130	TC-030146-23	
42	02	2	C	01HSS	6	1	90 Deg Elbow Long Radius BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	M230630	1724000839	00310	MCP2310-00002-18	
42	02	2	C	01HSS	7	1	Flange WN ›10" Thk.4.19mm 150LB RF ASTM A182 Gr.F316/316L	DF309/1	1724000839	01060	23-04271	
42	02	2	C	01HSS	1F	0,118	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
42	02	2	C	01HSS	1G	1,177	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
43	02	1	A	01HSS	2	1	90 Deg Elbow Long Radius BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	M230630	1724000839	00310	MCP2310-00002-18	
43	02	1	A	01HSS	2	1	90 Deg Elbow Long Radius BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	M230630	1724000839	00310	MCP2310-00002-18	
43	02	1	A	01HSS	3	1	Flange WN ›10" Thk.4.19mm 150LB RF ASTM A182 Gr.F316/316L	DF309/1	1724000839	01060	23-04271	
43	02	1	A	01HSS	1A	1,162	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
43	02	1	A	01HSS	1B	0,688	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
43	02	1	B	01HSS	2	1	90 Deg Elbow Long Radius BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	M230630	1724000839	00310	MCP2310-00002-18	
43	02	1	B	01HSS	3	1	Flange WN ›10" Thk.4.19mm 150LB RF ASTM A182 Gr.F316/316L	DF309/1	1724000839	01060	23-04271	
43	02	1	B	01HSS	2	1	90 Deg Elbow Long Radius BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	M230630	1724000839	00310	MCP2310-00002-18	
43	02	1	B	01HSS	3	1	Flange WN ›10" Thk.4.19mm 150LB RF ASTM A182 Gr.F316/316L	DF309/1	1724000839	01060	23-04271	
43	02	1	B	01HSS	1C	0,431	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
43	02	1	B	01HSS	1H	0,555	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
43	02	1	B	01HSS	1G	1,316	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
43	02	1	B	01HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
43	02	1	C	01HSS	2	1	90 Deg Elbow Long Radius BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	M230630	1724000839	00310	MCP2310-00002-18	
43	02	1	C	01HSS	2	1	90 Deg Elbow Long Radius BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	M230630	1724000839	00310	MCP2310-00002-18	
43	02	1	C	01HSS	3	1	Flange WN ›10" Thk.4.19mm 150LB RF ASTM A182 Gr.F316/316L	DF309/1	1724000839	01060	23-04271	
43	02	1	C	01HSS	3	1	Flange WN ›10" Thk.4.19mm 150LB RF ASTM A182 Gr.F316/316L	DF309/1	1724000839	01060	23-04271	
43	02	1	C	01HSS	1E	2,65	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
43	02	1	C	01HSS	1F	0,236	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
44	01	1	A	01HSS	2	1	Tee Reducing BW ›10"x6" Thk.4.19mmx3.4mm ASTM A403 Gr.WP316/316L	MN078-1	1724000839	00600	PSA3-FT-48583	
44	01	1	A	01HSS	2	1	Tee Reducing BW ›10"x6" Thk.4.19mmx3.4mm ASTM A403 Gr.WP316/316L	N180725AV11	1724000839	00600	01 100 1733605	
44	01	1	A	01HSS	2	1	Tee Reducing BW ›10"x6" Thk.4.19mmx3.4mm ASTM A403 Gr.WP316/316L	N180725AV11	1724000839	00600	01 100 1733605	
44	01	1	A	01HSS	3	1	Cap BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	51856	1724000839	00180	51856	
44	01	1	A	01HSS	1A	3,568	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
44	01	1	A	01HSS	1B	3,573	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
44	01	1	A	01HSS	STD C-40	1	PAD - STD C-40	VCC062015	1724000839	00100	230320P007	
44	01	1	A	01HSS	1C	0,446	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
44	01	1	B	01HSS	4	1	90 Deg Elbow Long Radius BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	M230630	1724000839	00310	MCP2310-00002-18	
44	01	1	B	01HSS	4	1	90 Deg Elbow Long Radius BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	M230630	1724000839	00310	MCP2310-00002-18	
44	01	1	B	01HSS	4	1	90 Deg Elbow Long Radius BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	M230630	1724000839	00310	MCP2310-00002-18	
44	01	1	B	01HSS	1D	5,286	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	AUN070583	1724000839	00100	F240206006	
44	01	1	B	01HSS	STD C-40	1	PAD - STD C-40	AUN070583	1724000839	00100	F240206006	
44	01	1	C	01HSS	4	1	90 Deg Elbow Long Radius BW ›10" Thk.4.19mm ASTM A403 Gr.WP316/316L	M230630	1724000839	00310	MCP2310-00002-18	
44	01	1	C	01HSS	1E	3,725	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
44	01	1	C	01HSS	1F	0,708	Pipe 273.0mm(10") thk.4.19mm ASTM A312 Gr.TP316/316L	VCC062015	1724000839	00100	230320P007	
45	00	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
45	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
45	00	1	A	03HSS	1A	0,79	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
45	00	1	A	03HSS	1B	0,087	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
46	00	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
46	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
46	00	1	A	03HSS	1A	0,79	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
46	00	1	A	03HSS	1B	0,087	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
47	00	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
47	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
47	00	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
47	00	1	A	03HSS	1B	0,937	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
48	00	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
48	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
48	00	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
48	00	1	A	03HSS	1B	0,937	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
49	00	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
49	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
49	00	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
49	00	1	A	03HSS	1B	0,937	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
50	01	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
50	01	1	A	03HSS	3	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
50	01	1	A	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
50	01	1	A	03HSS	1A	0,241	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
50	01	1	A	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
50	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
50	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
50	01	1	B	03HSS	1B	0,174	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
50	01	1	C	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
50	01	1	C	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
50	01	1	C	03HSS	1C	0,15	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
50	01	1	C	03HSS	1D	0,6	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
50	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
50	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
50	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
50	01	1	D	03HSS	1E	0,5	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
50	01	1	D	03HSS	1F	1,625	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
50	01	1	D	03HSS	1G	0,158	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
51	01	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
51	01	1	A	03HSS	3	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
51	01	1	A	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
51	01	1	A	03HSS	1A	0,241	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
51	01	1	A	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
51	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
51	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
51	01	1	B	03HSS	1B	0,174	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
51	01	1	C	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
51	01	1	C	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
51	01	1	C	03HSS	1C	0,15	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
51	01	1	C	03HSS	1D	0,6	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
51	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
51	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
51	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
51	01	1	D	03HSS	1E	0,5	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
51	01	1	D	03HSS	1F	1,625	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
51	01	1	D	03HSS	1G	0,158	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
52	01	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
52	01	1	A	03HSS	3	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
52	01	1	A	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
52	01	1	A	03HSS	1A	0,241	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
52	01	1	A	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
52	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
52	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
52	01	1	B	03HSS	1B	0,174	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
52	01	1	C	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
52	01	1	C	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
52	01	1	C	03HSS	1C	0,15	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
52	01	1	C	03HSS	1D	0,6	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
52	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
52	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
52	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
52	01	1	D	03HSS	1E	0,5	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
52	01	1	D	03HSS	1F	1,625	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
52	01	1	D	03HSS	1G	0,102	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
53	01	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
53	01	1	A	03HSS	3	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
53	01	1	A	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
53	01	1	A	03HSS	1A	0,241	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
53	01	1	A	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
53	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
53	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
53	01	1	B	03HSS	1B	0,174	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
53	01	1	C	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
53	01	1	C	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
53	01	1	C	03HSS	1C	0,15	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
53	01	1	C	03HSS	1D	0,6	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
53	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
53	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
53	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
53	01	1	D	03HSS	1E	0,5	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
53	01	1	D	03HSS	1F	1,625	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
53	01	1	D	03HSS	1G	0,102	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
54	01	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
54	01	1	A	03HSS	3	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
54	01	1	A	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
54	01	1	A	03HSS	1A	0,243	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
54	01	1	A	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
54	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
54	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
54	01	1	B	03HSS	1B	0,134	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
54	01	1	C	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
54	01	1	C	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
54	01	1	C	03HSS	1C	0,15	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
54	01	1	C	03HSS	1D	0,6	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
54	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
54	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
54	01	1	D	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
54	01	1	D	03HSS	1E	0,255	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
54	01	1	D	03HSS	1F	2,714	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
54	01	1	D	03HSS	1G	0,102	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
55	02	1	A	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
55	02	1	A	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
55	02	1	A	03HSS	1A	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
55	02	1	B	03HSS	4	1	Tee Reducing BW ›4"x3" Thk.3.05mmx3.05mm ASTM A403 Gr.WP316/316L	MN036-1	1724000839	00550	PSA3-FT-47169	
55	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by		
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:		
Project	**Hollandse Kust Noord Wind Park Project**			
Job	**123A90**			
Discipline	**PIPING**			
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
55	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
55	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
55	02	1	B	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
55	02	1	B	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
55	02	1	B	03HSS	1B	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
55	02	1	B	03HSS	1C	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
55	02	1	B	03HSS	1D	1,172	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
55	02	1	B	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
55	02	1	C	03HSS	5	1	Tee Reducing BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	MN094-1	1724001267	00400	PSA3-FT-49124	
55	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
55	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
55	02	1	C	03HSS	1E	0,098	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
55	02	1	D	03HSS	9	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724000839	00260	24-01-0126	
55	02	1	D	03HSS	9	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724000839	00260	24-01-0126	
55	02	1	D	03HSS	13	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
55	02	1	D	03HSS	2F	0,537	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
55	02	1	D	03HSS	2G	1,058	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
55	02	1	E	03HSS	3	1	Tee Reducing BW ›6"x3" Thk.7.11mmx3.05mm ASTM A403 Gr.WP316/316L	M0070-1	1724001267	00420	PSA3-FT-46697	
55	02	1	E	03HSS	6	1	Reducer Concentric BW ›6"x4" Thk.7.11mmx3.05mm ASTM A403 Gr.WP316/316L	MO070-1	1724000839	00400	PSA3-FT-46698	
55	02	1	E	03HSS	7	1	Reducer Concentric BW ›3"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	JO030-1	1724001267	00330	PSA3-FT-47131	
55	02	1	E	03HSS	10	1	Flange WN ›6" Thk.7.11mm 300LB RF ASTM A182 Gr.F316/316L	CH-16164	1724000839	01030	EXP/21-22/01811-56	
55	02	1	E	03HSS	12	1	Flange WN For Jackscrews ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	CH-21767	1724001267	00150	EXP/24-25/00069-35	
55	02	1	E	03HSS	13	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
55	02	1	F	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
55	02	1	E	03HSS	13	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
55	02	1	F	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
55	02	1	F	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
55	02	1	F	03HSS	1H	0,15	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
56	02	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
56	02	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
56	02	1	A	03HSS	1A	0,224	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
56	02	1	A	03HSS	1B	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
56	02	1	B	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
56	02	1	B	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
56	02	1	B	03HSS	1C	0,093	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
56	02	1	C	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
56	02	1	C	03HSS	4	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
56	02	1	C	03HSS	1D	0,319	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
56	02	1	D	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
56	02	1	D	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
56	02	1	D	03HSS	1E	0,168	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
57	02	1	A	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
57	02	1	A	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
57	02	1	A	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
57	02	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
57	02	1	A	03HSS	1B	0,49	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
57	02	1	A	03HSS	1C	0,31	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
57	02	1	B	03HSS	6	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
57	02	1	B	03HSS	1D	0,713	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
57	02	1	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
57	02	1	C	03HSS	6	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
57	02	1	C	03HSS	6	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
57	02	1	C	03HSS	1F	0,166	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
57	02	1	D	03HSS	6	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
57	02	1	D	03HSS	7	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
57	02	1	D	03HSS	1G	0,197	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
57	02	1	E	03HSS	3	1	Reducer Concentric BW ›2"x1" Thk.2.77mmx3.38mm ASTM A403 Gr.WP316/316L	1168624	1724000839	00370	1168624	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by		
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:		
Project	**Hollandse Kust Noord Wind Park Project**			
Job	**123A90**			
Discipline	**PIPING**			
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
57	02	1	E	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
57	02	1	E	03HSS	5	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
57	02	1	E	03HSS	6	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
57	02	1	E	03HSS	1H	0,129	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
58	00	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
58	00	1	A	01HSS	4	1	Flange WN ›6" Thk.3.4mm 300LB RF ASTM A182 Gr.F316/316L	CH-3217	1724000839	00930	EXP/0004-30/2016-17	
58	00	1	A	01HSS	1A	0,219	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
58	00	1	A	01HSS	1B	0,656	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
58	00	1	B	01HSS	2	1	Tee Reducing BW ›6"x4" Thk.3.4mmx3.05mm ASTM A403 Gr.WP316/316L	LN011-1	1724000839	00540	PSA3-FT-47111	
58	00	1	B	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
58	00	1	B	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
58	00	1	B	01HSS	1C	0,148	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
58	00	1	B	01HSS	1D	0,408	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
59	00	1	A	01SD	2	1	Flange WN For Jackscrews ›1" Thk.3,38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	01150	770	
59	00	1	A	01SD	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
59	00	1	A	01SD	1A	0,482	Pipe 33.4mm(1") thk.3.38mm ASTM A790 UNS S32760	BC2877	1724000839	00010	751007	
60	00	1	A	01SD	2	1	Flange WN For Jackscrews ›1" Thk.3,38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	01150	770	
60	00	1	A	01SD	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
60	00	1	A	01SD	1A	0,485	Pipe 33.4mm(1") thk.3.38mm ASTM A790 UNS S32760	BC2877	1724000839	00010	751007	
61	01	1	A	03HSS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
61	01	1	A	03HSS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
61	01	1	A	03HSS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
61	01	1	A	03HSS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
61	01	1	A	03HSS	3	1	Cap BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	1014684	1724000839	00200	1014684	
61	01	1	A	03HSS	1A	0,3	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	01	1	A	03HSS	1B	3,886	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	01	1	A	03HSS	1C	2,591	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	01	1	A	03HSS	1D	1,498	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	01	1	A	03HSS	1E	0,958	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	01	2	B	03HSS	2	1	Tee BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	66HSJ128	1724000839	00490	T202318004128	
61	01	2	B	03HSS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
61	01	2	B	03HSS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
61	01	2	B	03HSS	1K	0,736	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	01	2	B	03HSS	1L	0,438	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	01	2	C	03HSS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
61	01	2	C	03HSS	4	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724000839	01050	1673F/23-24-21	
61	01	2	C	03HSS	1F	2,641	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	01	2	C	03HSS	1G	0,553	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	01	2	D	03HSS	2	1	Tee BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	66HSJ128	1724000839	00490	T202318004128	
61	01	2	D	03HSS	2	1	Tee BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	66HSJ128	1724000839	00490	T202318004128	
61	01	2	D	03HSS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
61	01	2	D	03HSS	4	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724000839	01050	1673F/23-24-21	
61	01	2	D	03HSS	4	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724000839	01050	1673F/23-24-21	
61	01	2	D	03HSS	4	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724000839	01050	1673F/23-24-21	
61	01	2	D	03HSS	4	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724000839	01050	1673F/23-24-21	
61	01	2	D	03HSS	1H	0,386	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	01	2	D	03HSS	1I	0,15	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	01	2	D	03HSS	1J	0,18	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	02	3	E	03HSS	4	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
61	02	3	E	03HSS	4	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724000839	00280	24-01-0127	
61	02	3	E	03HSS	1M	4,328	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	02	3	E	03HSS	1N	0,438	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	02	3	F	03HSS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00570	JNDIA2023-GW1211-11	
61	02	3	F	03HSS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	1149624	1724000839	00570	1149624	
61	02	3	F	03HSS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	1149624	1724000839	00570	1149624	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
61	02	3	F	03HSS	3	1	Cap BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	1014684	1724000839	00200	1014684	
61	02	3	F	03HSS	1O	3,277	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	02	3	F	03HSS	1P	2,734	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	02	3	F	03HSS	1Q	3,886	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
61	02	3	F	03HSS	1R	0,3	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
62	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
62	00	1	A	01CS	1A	0,652	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
62	00	1	A	01CS	1B	3,059	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
62	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
62	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
62	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
62	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
62	00	1	B	01CS	1C	0,181	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
62	00	1	B	01CS	1D	3,28	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
62	00	1	B	01CS	1E	1,224	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
62	00	1	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
62	00	1	C	01CS	1F	0,874	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
62	00	1	C	01CS	1G	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
62	02	2	D	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
62	02	2	D	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
62	02	2	D	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
62	02	2	D	01CS	1I	1,788	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
62	02	2	D	01CS	1J	0,124	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
62	02	2	E	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
62	02	2	E	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
62	02	2	E	01CS	1K	0,238	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
62	02	2	E	01CS	1L	5,63	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
62	02	2	F	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
62	02	2	F	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
62	02	2	F	01CS	1M	0,97	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
62	02	2	F	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
62	02	2	G	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
62	02	2	G	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
62	02	2	G	01CS	1H	5	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
62	02	2	G	01CS	1N	1,25	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
63	01	1	A	01HSS	2	1	45 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	LN008-1	1724000839	00220	PSA3-FT-47098	
63	01	1	A	01HSS	4	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
63	01	1	A	01HSS	4	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
63	01	1	A	01HSS	1A	2,597	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
63	01	1	A	01HSS	1B	1,371	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
63	01	1	A	01HSS	1C	0,116	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
63	01	1	B	01HSS	4	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
63	01	1	B	01HSS	1D	2,951	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
63	01	1	C	01HSS	4	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
63	01	1	C	01HSS	1E	2,153	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
63	01	1	D	01HSS	5	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
63	01	1	D	01HSS	1F	0,485	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
63	01	1	E	01HSS	3	1	Reducer Concentric BW ›4"x3" Thk.3.05mmx3.05mm ASTM A403 Gr.WP316/316L	ECC26	1724000839	00330	053193/14-HG	
63	01	1	E	01HSS	5	1	Flange WN ›4" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	CH-20600	1724000839	00940	1779F/23-24-58	
63	01	1	E	01HSS	6	1	Flange WN ›3" Thk.3.05mm 150LB RF ASTM A182 Gr.F316/316L	3289	1724000839	01120	MTC-2071240-0706	
64	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
64	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
64	02	1	A	03HSS	1A	0,074	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
64	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
64	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: ROSETTI MARINO SpA Safety Manager Quality Control Dept.		
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90**			
ROSETTI MARINO	Discipline	**PIPING**			
	DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 03/04/2026
	RosettiDoc.Num.	**123A90-MTR-002**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
64	02	1	B	03HSS	1B	0,136	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
64	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
64	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
64	02	1	C	03HSS	1C	0,108	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
64	02	1	D	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
64	02	1	D	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
64	02	1	D	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
64	02	1	D	03HSS	1D	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
64	02	1	D	03HSS	1E	0,3	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
64	02	1	E	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
64	02	1	E	03HSS	4	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724000839	00350	MCP2401-00015-16	
64	02	1	E	03HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
64	02	1	E	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
64	02	1	E	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
64	02	1	E	03HSS	1F	0,2	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
64	02	1	E	03HSS	1G	0,125	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
64	02	1	E	03HSS	1H	1,072	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
64	02	1	F	03HSS	3	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
64	02	1	F	03HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
64	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
64	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
64	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
64	02	1	F	03HSS	8	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
64	02	1	F	03HSS	1I	0,372	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
64	02	1	F	03HSS	8	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
64	02	1	F	03HSS	1I	0,372	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
64	02	1	F	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
64	02	1	F	03HSS	1J	1,229	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
65	00	1	A	01HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
65	00	1	A	01HSS	5	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
65	00	1	A	01HSS	5	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
65	00	1	A	01HSS	1A	0,275	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
65	00	1	A	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
65	00	1	B	01HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
65	00	1	B	01HSS	5	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
65	00	1	B	01HSS	1B	0,771	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
65	00	1	B	01HSS	1C	0,095	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
65	00	1	C	01HSS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
65	00	1	C	01HSS	3	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
65	00	1	C	01HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
65	00	1	C	01HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
65	00	1	C	01HSS	1D	2,484	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
65	00	1	C	01HSS	1E	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
65	00	1	C	01HSS	1F	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
66	00	1	A	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	
66	00	1	A	01CS	3	1	Reducer Concentric BW ›1"x3/4" Thk.4.55mmx3.91mm ASTM/ASME A/SA420 Gr.WPL6	56-123056	1724000839	00730	4527-P8	
66	00	1	A	01CS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
66	00	1	A	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
66	00	1	A	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
66	00	1	A	01CS	6	1	Flange WN ›3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01210	2024-C_MFF-01243	
66	00	1	A	01CS	1A	0,105	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
66	00	1	A	01CS	1B	0,534	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
66	00	1	B	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	
66	00	1	B	01CS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
66	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
66	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
66	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
66	00	1	B	01CS	1D	0,451	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
66	00	1	B	01CS	1E	0,096	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
67	00	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›2" Thk.5.54mm ASTM/ASME A/SA420 Gr.WPL6	774	1724000839	00670	4527-P2	
67	00	1	A	01CS	4	1	Flange WN ›2" Thk.5.54mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70486	1724000839	01190	2024-C_MFF-01243	
67	00	1	A	01CS	1A	0,092	Pipe 60.3mm(2") thk.5.54mm ASTM/ASME A/SA333 Gr.6	R58853	1724000838	00020	E10065	
67	00	1	A	01CS	1B	1,654	Pipe 60.3mm(2") thk.5.54mm ASTM/ASME A/SA333 Gr.6	R58853	1724000838	00020	E10065	
68	03	1	A	01HSS	2	1	45 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	E62123	1724000839	00230	MC-TYF-6-20080627118	
68	03	1	A	01HSS	1A	0,102	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	1	A	01HSS	1B	2,157	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	1	A	01HSS	1M	0,22	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	1	B	01HSS	3	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00560	JNDIA2023-GW1177-01	
68	03	1	B	01HSS	4	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
68	03	1	B	01HSS	5	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
68	03	1	B	01HSS	1C	4,197	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	1	C	01HSS	5	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
68	03	1	C	01HSS	1D	5,38	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	1	D	01HSS	5	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
68	03	1	D	01HSS	5	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
68	03	1	D	01HSS	1E	2,925	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	2	E	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
68	03	2	E	01HSS	1F	2,598	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	2	E	01HSS	1G	0,751	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	2	E	01HSS	1L	1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	2	F	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
68	03	2	E	01HSS	1L	1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	2	F	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
68	03	2	F	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
68	03	2	F	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
68	03	2	F	01HSS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
68	03	2	F	01HSS	1H	1,55	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	2	F	01HSS	1I	0,248	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	2	G	01HSS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
68	03	2	G	01HSS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
68	03	2	G	01HSS	1J	0,275	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	2	H	01HSS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
68	03	2	H	01HSS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
68	03	2	H	01HSS	1K	0,099	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
68	03	2	I	01HSS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
68	03	2	I	01HSS	4	1	Flange WN For Jackscrews ›1" Thk.3,38mm 150LB RF ASTM A182 Gr.F316/316L	346569	1724000839	01080	770	
69	00	1	A	03HSS	2	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724001267	00320	MCP2401-00015-16	
69	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
69	00	1	A	03HSS	4	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	
69	00	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
69	00	1	MONT	03HSS	10	4	Stud Bolt + 2 Heavy Nuts 5/8" L=95MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01620	3167558	
69	00	2	B	03HSS	2	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724000839	00350	MCP2401-00015-16	
69	00	2	B	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
69	00	2	B	03HSS	4	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	
69	00	2	B	03HSS	1B	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
69	00	2	MONT	03HSS	10	4	Stud Bolt + 2 Heavy Nuts 5/8" L=95MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01620	3167558	
70	00	1	A	03HSS	2	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724000839	00350	MCP2401-00015-16	
70	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
70	00	1	A	03HSS	4	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	
70	00	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
70	00	1	MONT	03HSS	10	4	Stud Bolt + 2 Heavy Nuts 5/8" L=95MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01620	3167558	
70	00	2	B	03HSS	2	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724000839	00350	MCP2401-00015-16	
70	00	2	B	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
70	00	2	B	03HSS	4	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
70	00	2	B	03HSS	1B	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
70	00	2	MONT	03HSS	10	4	Stud Bolt + 2 Heavy Nuts 5/8" L=95MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01620	3167558	
71	01	1	A	03HSS	1	1	Reducer Concentric BW ›3"x1.1/2" Thk.3.05mmx3.68mm ASTM A403 Gr.WP316/316L	1074624	1724000839	00360	1074624	
71	01	1	A	03HSS	3	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724001267	00130	1673F/23-24-21	
71	01	1	B	03HSS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	1163621	1724000839	00390	1163621	
71	01	1	B	03HSS	3	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724001267	00130	1673F/23-24-21	
71	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
72	02	1	A	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
72	02	1	A	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
72	02	1	A	03HSS	1A	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
72	02	1	B	03HSS	4	1	Tee Reducing BW ›4"x3" Thk.3.05mmx3.05mm ASTM A403 Gr.WP316/316L	MN036-1	1724000839	00550	PSA3-FT-47169	
72	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
72	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
72	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
72	02	1	B	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
72	02	1	B	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
72	02	1	B	03HSS	1B	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
72	02	1	B	03HSS	1C	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
72	02	1	B	03HSS	1D	1,172	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
72	02	1	B	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
72	02	1	C	03HSS	5	1	Tee Reducing BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	MN094-1	1724001267	00400	PSA3-FT-49124	
72	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
72	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
72	02	1	C	03HSS	1E	0,098	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
72	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
72	02	1	C	03HSS	1E	0,098	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
72	02	1	D	03HSS	9	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
72	02	1	D	03HSS	9	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
72	02	1	D	03HSS	13	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
72	02	1	D	03HSS	2F	0,537	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
72	02	1	D	03HSS	2G	1,058	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
72	02	1	E	03HSS	3	1	Tee Reducing BW ›6"x3" Thk.7.11mmx3.05mm ASTM A403 Gr.WP316/316L	M0070-1	1724001267	00420	PSA3-FT-46697	
72	02	1	E	03HSS	6	1	Reducer Concentric BW ›6"x4" Thk.7.11mmx3.05mm ASTM A403 Gr.WP316/316L	MO070-1	1724000839	00400	PSA3-FT-46698	
72	02	1	E	03HSS	7	1	Reducer Concentric BW ›3"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	JO030-1	1724001267	00330	PSA3-FT-47131	
72	02	1	E	03HSS	10	1	Flange WN ›6" Thk.7.11mm 300LB RF ASTM A182 Gr.F316/316L	CH-16164	1724000839	01030	EXP/21-22/01811-56	
72	02	1	E	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
72	02	1	E	03HSS	13	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
72	02	1	F	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
72	02	1	F	03HSS	12	1	Flange WN For Jackscrews ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	CH-21767	1724001267	00150	EXP/24-25/00069-35	
72	02	1	F	03HSS	1H	0,15	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
73	00	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
73	00	1	A	01HSS	4	1	Flange WN ›6" Thk.3.4mm 300LB RF ASTM A182 Gr.F316/316L	CH-3217	1724000839	00930	EXP/0004-30/2016-17	
73	00	1	A	01HSS	1A	0,219	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
73	00	1	A	01HSS	1B	0,616	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
73	00	1	B	01HSS	2	1	Tee Reducing BW ›6"x4" Thk.3.4mmx3.05mm ASTM A403 Gr.WP316/316L	LN011-1	1724000839	00540	PSA3-FT-47111	
73	00	1	B	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
73	00	1	B	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
73	00	1	B	01HSS	1C	0,152	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
73	00	1	B	01HSS	1D	0,408	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
74	00	1	A	03HSS	2	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724001267	00320	MCP2401-00015-16	
74	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
74	00	1	A	03HSS	4	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	
74	00	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
74	00	1	MONT	03HSS	10	4	Stud Bolt + 2 Heavy Nuts 5/8" L=95MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01620	3167558	
74	00	2	B	03HSS	2	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724001267	00320	MCP2401-00015-16	
74	00	2	B	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
74	00	2	B	03HSS	4	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
74	00	2	B	03HSS	1B	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
74	00	2	MONT	03HSS	10	4	Stud Bolt + 2 Heavy Nuts 5/8" L=95MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01620	3167558	
75	01	1	A	03HSS	1	1	Reducer Concentric BW ›3"x1.1/2" Thk.3.05mmx3.68mm ASTM A403 Gr.WP316/316L	1074624	1724000839	00360	1074624	
75	01	1	A	03HSS	3	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724001267	00130	1673F/23-24-21	
75	01	1	B	03HSS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	1163621	1724000839	00390	1163621	
75	01	1	B	03HSS	3	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724001267	00130	1673F/23-24-21	
75	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
76	02	1	A	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
76	02	1	A	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
76	02	1	A	03HSS	1A	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
76	02	1	B	03HSS	4	1	Tee Reducing BW ›4"x3" Thk.3.05mmx3.05mm ASTM A403 Gr.WP316/316L	MN036-1	1724000839	00550	PSA3-FT-47169	
76	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
76	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
76	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
76	02	1	B	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
76	02	1	B	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
76	02	1	B	03HSS	1B	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
76	02	1	B	03HSS	1C	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
76	02	1	B	03HSS	1D	1,172	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
76	02	1	B	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
76	02	1	C	03HSS	5	1	Tee Reducing BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	MN094-1	1724001267	00400	PSA3-FT-49124	
76	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
76	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
76	02	1	C	03HSS	1E	0,098	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
76	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
76	02	1	C	03HSS	1E	0,098	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
76	02	1	D	03HSS	9	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
76	02	1	D	03HSS	9	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
76	02	1	D	03HSS	13	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
76	02	1	D	03HSS	2F	0,537	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
76	02	1	D	03HSS	2G	1,058	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
76	02	1	E	03HSS	3	1	Tee Reducing BW ›6"x3" Thk.7.11mmx3.05mm ASTM A403 Gr.WP316/316L	M0070-1	1724001267	00420	PSA3-FT-46697	
76	02	1	E	03HSS	6	1	Reducer Concentric BW ›6"x4" Thk.7.11mmx3.05mm ASTM A403 Gr.WP316/316L	MO070-1	1724000839	00400	PSA3-FT-46698	
76	02	1	E	03HSS	7	1	Reducer Concentric BW ›3"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	JO030-1	1724001267	00330	PSA3-FT-47131	
76	02	1	E	03HSS	10	1	Flange WN ›6" Thk.7.11mm 300LB RF ASTM A182 Gr.F316/316L	CH-16164	1724000839	01030	EXP/21-22/01811-56	
76	02	1	E	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
76	02	1	E	03HSS	13	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
76	02	1	F	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
76	02	1	F	03HSS	12	1	Flange WN For Jackscrews ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	CH-21767	1724001267	00150	EXP/24-25/00069-35	
76	02	1	F	03HSS	1H	0,15	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
77	00	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
77	00	1	A	01HSS	4	1	Flange WN ›6" Thk.3.4mm 300LB RF ASTM A182 Gr.F316/316L	CH-3217	1724000839	00930	EXP/0004-30/2016-17	
77	00	1	A	01HSS	1A	0,219	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
77	00	1	A	01HSS	1B	0,576	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
77	00	1	B	01HSS	2	1	Tee Reducing BW ›6"x4" Thk.3.4mmx3.05mm ASTM A403 Gr.WP316/316L	LN011-1	1724000839	00540	PSA3-FT-47111	
77	00	1	B	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
77	00	1	B	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
77	00	1	B	01HSS	1C	0,152	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
77	00	1	B	01HSS	1D	0,408	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
78	00	1	A	03HSS	2	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724001267	00320	MCP2401-00015-16	
78	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
78	00	1	A	03HSS	4	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	
78	00	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
78	00	1	MONT	03HSS	10	4	Stud Bolt + 2 Heavy Nuts 5/8" L=95MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01620	3167558	
78	00	2	B	03HSS	2	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724001267	00320	MCP2401-00015-16	
78	00	2	B	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
78	00	2	B	03HSS	4	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
78	00	2	B	03HSS	1B	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
78	00	2	MONT	03HSS	10	4	Stud Bolt + 2 Heavy Nuts 5/8" L=95MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01620	3167558	
79	01	1	A	03HSS	1	1	Reducer Concentric BW ›3"x1.1/2" Thk.3.05mmx3.68mm ASTM A403 Gr.WP316/316L	1074624	1724000839	00360	1074624	
79	01	1	A	03HSS	3	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724000839	01050	1673F/23-24-21	
79	01	1	B	03HSS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	1163621	1724000839	00390	1163621	
79	01	1	B	03HSS	3	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724000839	01050	1673F/23-24-21	
79	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
80	02	1	A	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
80	02	1	A	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
80	02	1	A	03HSS	1A	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
80	02	1	B	03HSS	4	1	Tee Reducing BW ›4"x3" Thk.3.05mmx3.05mm ASTM A403 Gr.WP316/316L	MN036-1	1724000839	00550	PSA3-FT-47169	
80	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
80	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
80	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
80	02	1	B	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
80	02	1	B	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
80	02	1	B	03HSS	1B	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
80	02	1	B	03HSS	1C	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
80	02	1	B	03HSS	1D	1,173	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
80	02	1	B	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
80	02	1	C	03HSS	5	1	Tee Reducing BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	MN094-1	1724001267	00400	PSA3-FT-49124	
80	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
80	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
80	02	1	C	03HSS	1E	0,098	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
80	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
80	02	1	C	03HSS	1E	0,098	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
80	02	1	D	03HSS	9	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
80	02	1	D	03HSS	9	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
80	02	1	D	03HSS	13	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
80	02	1	D	03HSS	2F	0,537	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
80	02	1	D	03HSS	2G	1,058	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
80	02	1	E	03HSS	3	1	Tee Reducing BW ›6"x3" Thk.7.11mmx3.05mm ASTM A403 Gr.WP316/316L	M0070-1	1724001267	00420	PSA3-FT-46697	
80	02	1	E	03HSS	6	1	Reducer Concentric BW ›6"x4" Thk.7.11mmx3.05mm ASTM A403 Gr.WP316/316L	MO070-1	1724000839	00400	PSA3-FT-46698	
80	02	1	E	03HSS	7	1	Reducer Concentric BW ›3"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	JO030-1	1724001267	00330	PSA3-FT-47131	
80	02	1	E	03HSS	10	1	Flange WN ›6" Thk.7.11mm 300LB RF ASTM A182 Gr.F316/316L	CH-16164	1724000839	01030	EXP/21-22/01811-56	
80	02	1	E	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
80	02	1	E	03HSS	13	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
80	02	1	F	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
80	02	1	F	03HSS	12	1	Flange WN For Jackscrews ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	CH-21767	1724001267	00150	EXP/24-25/00069-35	
80	02	1	F	03HSS	1H	0,15	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
81	00	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
81	00	1	A	01HSS	4	1	Flange WN ›6" Thk.3.4mm 300LB RF ASTM A182 Gr.F316/316L	CH-3217	1724000839	00930	EXP/0004-30/2016-17	
81	00	1	A	01HSS	1A	0,218	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
81	00	1	A	01HSS	1B	0,576	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
81	00	1	B	01HSS	2	1	Tee Reducing BW ›6"x4" Thk.3.4mmx3.05mm ASTM A403 Gr.WP316/316L	LN011-1	1724000839	00540	PSA3-FT-47111	
81	00	1	B	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
81	00	1	B	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
81	00	1	B	01HSS	1C	0,152	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
81	00	1	B	01HSS	1D	0,408	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
82	00	1	A	03HSS	2	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724001267	00320	MCP2401-00015-16	
82	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
82	00	1	A	03HSS	4	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	
82	00	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
82	00	1	MONT	03HSS	10	4	Stud Bolt + 2 Heavy Nuts 5/8" L=95MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01620	3167558	
82	00	2	B	03HSS	2	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724001267	00320	MCP2401-00015-16	
82	00	2	B	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
82	00	2	B	03HSS	4	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: ROSETTI MARINO SpA Stefani Andrea Quality Control Dept.		
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90**			
ROSETTI MARINO	Discipline	**PIPING**			
	DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 03/04/2026
	RosettiDoc.Num.	**123A90-MTR-002**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
82	00	2	B	03HSS	1B	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
82	00	2	MONT	03HSS	10	4	Stud Bolt + 2 Heavy Nuts 5/8" L=95MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01620	3167558	
83	01	1	A	03HSS	1	1	Reducer Concentric BW ›3"x1.1/2" Thk.3.05mmx3.68mm ASTM A403 Gr.WP316/316L	1074624	1724000839	00360	1074624	
83	01	1	A	03HSS	3	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724000839	01050	1673F/23-24-21	
83	01	1	B	03HSS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	1163621	1724000839	00390	1163621	
83	01	1	B	03HSS	3	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724000839	01050	1673F/23-24-21	
83	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
84	02	1	A	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
84	02	1	A	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DG350	1724000839	01040	12/230025685/18/REV-00	
84	02	1	A	03HSS	1A	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
84	02	1	B	03HSS	4	1	Tee Reducing BW ›4"x3" Thk.3.05mmx3.05mm ASTM A403 Gr.WP316/316L	MN036-1	1724000839	00550	PSA3-FT-47169	
84	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
84	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
84	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
84	02	1	B	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
84	02	1	B	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
84	02	1	B	03HSS	1B	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
84	02	1	B	03HSS	1C	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
84	02	1	B	03HSS	1D	1,173	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
84	02	1	B	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
84	02	1	C	03HSS	5	1	Tee Reducing BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	MN094-1	1724001267	00400	PSA3-FT-49124	
84	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	EA085	1724000839	01040	12/240000620/40/REV-01	
84	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
84	02	1	C	03HSS	1E	0,098	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
84	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
84	02	1	C	03HSS	1E	0,098	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
84	02	1	D	03HSS	9	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
84	02	1	D	03HSS	9	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	1482623	1724000839	00260	1482623	
84	02	1	D	03HSS	13	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
84	02	1	D	03HSS	2F	0,537	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
84	02	1	D	03HSS	2G	1,058	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
84	02	1	E	03HSS	3	1	Tee Reducing BW ›6"x3" Thk.7.11mmx3.05mm ASTM A403 Gr.WP316/316L	M0070-1	1724001267	00420	PSA3-FT-46697	
84	02	1	E	03HSS	6	1	Reducer Concentric BW ›6"x4" Thk.7.11mmx3.05mm ASTM A403 Gr.WP316/316L	MO070-1	1724000839	00400	PSA3-FT-46698	
84	02	1	E	03HSS	7	1	Reducer Concentric BW ›3"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	JO030-1	1724001267	00330	PSA3-FT-47131	
84	02	1	E	03HSS	10	1	Flange WN ›6" Thk.7.11mm 300LB RF ASTM A182 Gr.F316/316L	CH-16164	1724000839	01030	EXP/21-22/01811-56	
84	02	1	E	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	EA085	1724000839	01040	12/240000620/40/REV-01	
84	02	1	E	03HSS	13	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
84	02	1	F	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
84	02	1	F	03HSS	12	1	Flange WN For Jackscrews ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	CH-21767	1724001267	00150	EXP/24-25/00069-35	
84	02	1	F	03HSS	1H	0,15	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
85	00	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
85	00	1	A	01HSS	4	1	Flange WN ›6" Thk.3.4mm 300LB RF ASTM A182 Gr.F316/316L	CH-3217	1724000839	00930	EXP/0004-30/2016-17	
85	00	1	A	01HSS	1A	0,219	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
85	00	1	A	01HSS	1B	0,616	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
85	00	1	B	01HSS	2	1	Tee Reducing BW ›6"x4" Thk.3.4mmx3.05mm ASTM A403 Gr.WP316/316L	LN011-1	1724000839	00540	PSA3-FT-47111	
85	00	1	B	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
85	00	1	B	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
85	00	1	B	01HSS	1C	0,152	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
85	00	1	B	01HSS	1D	0,408	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
86	00	1	A	03HSS	2	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724001267	00320	MCP2401-00015-16	
86	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
86	00	1	A	03HSS	4	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	
86	00	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
86	00	1	MONT	03HSS	10	4	Stud Bolt + 2 Heavy Nuts 5/8" L=95MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01620	3167558	
86	00	2	B	03HSS	2	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724001267	00320	MCP2401-00015-16	
86	00	2	B	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
86	00	2	B	03HSS	4	1	Flange WN ›3/4" Thk.2.87mm 300LB RF ASTM A182 Gr.F316/316L	A-5735	1724000839	00990	GLECO/J-1391-18	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
86	00	2	B	03HSS	1B	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
86	00	2	MONT	03HSS	10	4	Stud Bolt + 2 Heavy Nuts 5/8" L=95MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01620	3167558	
87	01	1	A	03HSS	1	1	Reducer Concentric BW ›3"x1.1/2" Thk.3.05mmx3.68mm ASTM A403 Gr.WP316/316L	1074624	1724000839	00360	1074624	
87	01	1	A	03HSS	3	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724000839	01050	1673F/23-24-21	
87	01	1	B	03HSS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	1163621	1724000839	00390	1163621	
87	01	1	B	03HSS	3	1	Flange WN ›1.1/2" Thk.3.68mm 300LB RF ASTM A182 Gr.F316/316L	CH-18895	1724000839	01050	1673F/23-24-21	
87	01	1	B	03HSS	4	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
88	02	1	A	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
88	02	1	A	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
88	02	1	A	03HSS	1A	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
88	02	1	B	03HSS	4	1	Tee Reducing BW ›4"x3" Thk.3.05mmx3.05mm ASTM A403 Gr.WP316/316L	MN036-1	1724000839	00550	PSA3-FT-47169	
88	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
88	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
88	02	1	B	03HSS	8	1	90 Deg Elbow Long Radius BW ›4" Thk.3.05mm ASTM A403 Gr.WP316/316L	M230735	1724000839	00290	MCP2401-00015-19	
88	02	1	B	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
88	02	1	B	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
88	02	1	B	03HSS	1B	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
88	02	1	B	03HSS	1C	0,1	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
88	02	1	B	03HSS	1D	0,922	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
88	02	1	B	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
88	02	1	C	03HSS	5	1	Tee Reducing BW ›4"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	MN094-1	1724001267	00400	PSA3-FT-49124	
88	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
88	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
88	02	1	C	03HSS	1E	0,098	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
88	02	1	C	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
88	02	1	C	03HSS	1E	0,098	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
88	02	1	D	03HSS	9	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724001267	00070	24-01-0126	
88	02	1	D	03HSS	9	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A403 Gr.WP316/316L	M230234-1	1724001267	00070	24-01-0126	
88	02	1	D	03HSS	13	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
88	02	1	D	03HSS	2F	0,537	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
88	02	1	D	03HSS	2G	1,058	Pipe 60.3mm(2") thk.2.77mm ASTM A312 Gr.TP316/316L	235632	1724000839	00070	WSSL/SP-316L/0951/1223	
88	02	1	E	03HSS	3	1	Tee Reducing BW ›6"x3" Thk.7.11mmx3.05mm ASTM A403 Gr.WP316/316L	M0070-1	1724001267	00420	PSA3-FT-46697	
88	02	1	E	03HSS	6	1	Reducer Concentric BW ›6"x4" Thk.7.11mmx3.05mm ASTM A403 Gr.WP316/316L	MO070-1	1724000839	00400	PSA3-FT-46698	
88	02	1	E	03HSS	7	1	Reducer Concentric BW ›3"x2" Thk.3.05mmx2.77mm ASTM A403 Gr.WP316/316L	JO030-1	1724001267	00330	PSA3-FT-47131	
88	02	1	E	03HSS	10	1	Flange WN ›6" Thk.7.11mm 300LB RF ASTM A182 Gr.F316/316L	CH-16164	1724000839	01030	EXP/21-22/01811-56	
88	02	1	E	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
88	02	1	E	03HSS	13	1	Flange WN ›2" Thk.2.77mm 300LB RF ASTM A182 Gr.F316/316L	DL010	1724001267	00120	100028548/53 REV.1	
88	02	1	F	03HSS	11	1	Flange WN ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	DK476	1724000839	01040	12/230041537/26/REV-00	
88	02	1	F	03HSS	12	1	Flange WN For Jackscrews ›4" Thk.3.05mm 300LB RF ASTM A182 Gr.F316/316L	CH-21767	1724001267	00150	EXP/24-25/00069-35	
88	02	1	F	03HSS	1H	0,15	Pipe 114.3mm(4") thk.3.05mm ASTM A312 Gr.TP316/316L	NJ113	1724000839	00080	462	
89	00	1	A	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
89	00	1	A	01HSS	4	1	Flange WN ›6" Thk.3.4mm 300LB RF ASTM A182 Gr.F316/316L	CH-3217	1724000839	00930	EXP/0004-30/2016-17	
89	00	1	A	01HSS	1A	0,219	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
89	00	1	A	01HSS	1B	0,657	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
89	00	1	B	01HSS	2	1	Tee Reducing BW ›6"x4" Thk.3.4mmx3.05mm ASTM A403 Gr.WP316/316L	LN011-1	1724000839	00540	PSA3-FT-47111	
89	00	1	B	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
89	00	1	B	01HSS	3	1	90 Deg Elbow Long Radius BW ›6" Thk.3.4mm ASTM A403 Gr.WP316/316L	GTA070-01-103LR	1724000839	00300	PSA3-FT-47143	
89	00	1	B	01HSS	1C	0,408	Pipe 168.3mm(6") thk.3.4mm ASTM A312 Gr.TP316/316L	NJ112	1724000839	00090	416	
90	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
90	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
90	02	1	A	03HSS	1A	0,074	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
90	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
90	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
90	02	1	B	03HSS	1B	0,136	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
90	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
90	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
90	02	1	C	03HSS	1C	0,108	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
90	02	1	D	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
90	02	1	D	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
90	02	1	D	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
90	02	1	D	03HSS	1D	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
90	02	1	D	03HSS	1E	0,3	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
90	02	1	E	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
90	02	1	E	03HSS	4	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724000839	00350	MCP2401-00015-16	
90	02	1	E	03HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
90	02	1	E	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
90	02	1	E	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
90	02	1	E	03HSS	1F	0,2	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
90	02	1	E	03HSS	1G	0,125	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
90	02	1	E	03HSS	1H	1,072	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
90	02	1	F	03HSS	3	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00560	JNDIA2023-GW1177-01	
90	02	1	F	03HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
90	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
90	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
90	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
90	02	1	F	03HSS	8	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
90	02	1	F	03HSS	1I	0,372	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
90	02	1	F	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
90	02	1	F	03HSS	1J	1,229	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
91	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
91	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
91	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
91	02	1	A	03HSS	1A	0,074	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
91	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
91	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
91	02	1	B	03HSS	1B	0,136	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
91	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
91	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
91	02	1	C	03HSS	1C	0,108	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
91	02	1	D	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
91	02	1	D	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
91	02	1	D	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
91	02	1	D	03HSS	1D	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
91	02	1	D	03HSS	1E	0,3	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
91	02	1	E	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
91	02	1	E	03HSS	4	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724000839	00350	MCP2401-00015-16	
91	02	1	E	03HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
91	02	1	E	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
91	02	1	E	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
91	02	1	E	03HSS	1F	0,2	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
91	02	1	E	03HSS	1G	0,125	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
91	02	1	E	03HSS	1H	1,072	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
91	02	1	F	03HSS	3	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00560	JNDIA2023-GW1177-01	
91	02	1	F	03HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
91	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
91	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
91	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
91	02	1	F	03HSS	8	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
91	02	1	F	03HSS	1I	0,372	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
91	02	1	F	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
91	02	1	F	03HSS	1J	1,229	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
92	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
92	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
92	02	1	A	03HSS	1A	0,073	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
92	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
92	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
92	02	1	B	03HSS	1B	0,148	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
92	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
92	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
92	02	1	C	03HSS	1C	0,096	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
92	02	1	D	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
92	02	1	D	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
92	02	1	D	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
92	02	1	D	03HSS	1D	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
92	02	1	D	03HSS	1E	0,3	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
92	02	1	E	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
92	02	1	E	03HSS	4	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724000839	00350	MCP2401-00015-16	
92	02	1	E	03HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
92	02	1	E	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
92	02	1	E	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
92	02	1	E	03HSS	1F	0,2	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
92	02	1	E	03HSS	1G	0,125	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
92	02	1	E	03HSS	1H	1,072	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
92	02	1	F	03HSS	3	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00560	JNDIA2023-GW1177-01	
92	02	1	F	03HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
92	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
92	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
92	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
92	02	1	F	03HSS	8	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
92	02	1	F	03HSS	1I	0,372	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
92	02	1	F	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
92	02	1	F	03HSS	1J	1,229	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
93	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
93	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
93	02	1	A	03HSS	1A	0,074	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
93	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
93	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
93	02	1	B	03HSS	1B	0,136	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
93	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
93	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
93	02	1	C	03HSS	1C	0,109	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
93	02	1	D	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
93	02	1	D	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
93	02	1	D	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
93	02	1	D	03HSS	1D	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
93	02	1	D	03HSS	1E	0,3	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
93	02	1	E	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
93	02	1	E	03HSS	4	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724000839	00350	MCP2401-00015-16	
93	02	1	E	03HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
93	02	1	E	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
93	02	1	E	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
93	02	1	E	03HSS	1F	0,2	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
93	02	1	E	03HSS	1G	0,125	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
93	02	1	E	03HSS	1H	1,072	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
93	02	1	F	03HSS	3	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
93	02	1	F	03HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
93	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
93	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
93	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
93	02	1	F	03HSS	8	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
93	02	1	F	03HSS	1I	0,372	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
93	02	1	F	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
93	02	1	F	03HSS	1J	1,229	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
94	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
94	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
94	02	1	A	03HSS	1A	0,076	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
94	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
94	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
94	02	1	B	03HSS	1B	0,134	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
94	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
94	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
94	02	1	C	03HSS	1C	0,109	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
94	02	1	D	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
94	02	1	D	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
94	02	1	D	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
94	02	1	D	03HSS	1D	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
94	02	1	D	03HSS	1E	0,3	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
94	02	1	E	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
94	02	1	E	03HSS	4	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724000839	00350	MCP2401-00015-16	
94	02	1	E	03HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
94	02	1	E	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
94	02	1	E	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
94	02	1	E	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
94	02	1	E	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	
94	02	1	E	03HSS	1F	0,2	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
94	02	1	E	03HSS	1G	0,125	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
94	02	1	E	03HSS	1H	1,072	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
94	02	1	F	03HSS	3	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	EF6171	1724000839	00560	JNDIA2023-GW1177-01	
94	02	1	F	03HSS	5	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
94	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
94	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
94	02	1	F	03HSS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	1519623	1724000839	00270	1519623	
94	02	1	F	03HSS	8	1	Flange WN For Jackscrews ›1" Thk.3,38mm 300LB RF ASTM A182 Gr.F316/316L	S-27133	1724001267	00160	IND.21.6268/QM/U	
94	02	1	F	03HSS	1I	0,372	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
94	02	1	F	03HSS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	
94	02	1	F	03HSS	1J	1,229	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
95	01	1	A	01SS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
95	01	1	A	01SS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
95	01	1	A	01SS	1A	0,183	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
95	01	1	A	01SS	1B	2,173	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
95	01	1	A	01SS	1C	3,071	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
95	01	1	B	01SS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
95	01	1	B	01SS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
95	01	1	B	01SS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
95	01	1	B	01SS	1D	0,928	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
95	01	1	B	01SS	1E	1,172	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
95	01	1	C	01SS	4	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
95	01	1	C	01SS	1F	1,149	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
95	01	1	D	01SS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
95	01	1	D	01SS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
95	01	1	D	01SS	4	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
95	01	1	D	01SS	1G	1,985	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
95	01	1	E	01SS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
95	01	1	E	01SS	1I	5,435	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
95	01	1	F	01SS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by		
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:		
Project	**Hollandse Kust Noord Wind Park Project**			
Job	**123A90**			
Discipline	**PIPING**			
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
95	01	1	F	01SS	4	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
95	01	1	F	01SS	1H	0,17	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
95	01	1	F	01SS	1J	1,697	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
97	00	1	A	01CS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	32-J9K6232	1724000839	00740	4527-P9	
97	00	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	
97	00	1	A	01CS	4	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	
97	00	1	A	01CS	1A	0,094	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
97	00	1	B	01CS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	32	1724001267	00310	5924-P3	
97	00	1	B	01CS	4	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	
97	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
97	00	1	B	01CS	1B	0,149	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535	
98	00	1	MONT	01CS	2	1	Insulation Kit ›3" 150LB RF	6436	1724001828	00230	4920246632480	
98	00	1	MONT	01CS	3	4	Stud Bolt + 2 Heavy Nuts 5/8" L=95MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01620	3167558	
99	00	1	A	01CS	1	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
99	00	1	A	01CS	2	1	Flange WN For Jackscrews ›3" Thk.5.49mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70167	1724001267	00140	2924-C_MFF-01793	
99	00	1	A	01CS	3	1	Flange WN ›3" Thk.5.49mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70167	1724001267	00100	2924-C_MFF-01793	
100	01	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
100	01	1	A	01CS	4	1	Flange WN For Jackscrews ›1" Thk.4,55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01260	2024-C_MMF-01566	
100	01	1	A	01CS	1A	0,075	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	01	1	A	01CS	1B	0,688	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	01	1	A	01CS	1O	0,3	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	01	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
100	01	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
100	01	1	B	01CS	1C	0,659	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	01	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
100	01	1	B	01CS	1C	0,659	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	01	1	B	01CS	1D	0,076	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	01	1	C	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	
100	01	1	C	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	
100	01	1	C	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
100	01	1	C	01CS	1E	2,056	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	01	1	C	01CS	1N	0,3	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	01	1	D	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
100	01	1	D	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
100	01	1	D	01CS	1F	0,516	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	01	1	D	01CS	1G	0,543	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	00	2	E	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
100	00	2	E	01CS	1H	0,879	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	00	2	E	01CS	1I	0,999	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	00	2	F	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
100	00	2	F	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
100	00	2	F	01CS	1J	1,306	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	00	2	F	01CS	1K	3,743	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	00	2	G	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
100	00	2	G	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
100	00	2	G	01CS	1L	0,276	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
100	00	2	G	01CS	1M	4,525	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
101	00	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
101	00	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
101	00	1	A	01SS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
101	00	1	A	01SS	1B	0,35	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
101	00	1	B	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
101	00	1	B	01SS	1C	0,65	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
102	00	1	A	01SS	2	1	Tee Reducing BW ›1.1/2"x3/4" Thk.3.68mmx2.87mm ASTM A403 Gr.WP316/316L	12B258	1724000839	00610	10303342	
102	00	1	A	01SS	4	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
102	00	1	A	01SS	5	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724001267	00080	MCP2404-00012-12	
102	00	1	A	01SS	5	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724001267	00080	MCP2404-00012-12	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by		
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: ROSETTI MARINO SpA Antonio Salsi Quality Control Dept.		
Project	**Hollandse Kust Noord Wind Park Project**			
Job	**123A90**			
Discipline	**PIPING**			
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
102	00	1	A	01SS	7	1	Flange WN ›1.1/2" Thk.3.68mm 150LB RF ASTM A182 Gr.F316/316L	CH-17777	1724000839	00970	EXP/22-23/00790-12	
102	00	1	A	01SS	1A	0,506	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
102	00	1	A	01SS	1B	1,544	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
102	00	1	B	01SS	3	1	Reducer Concentric BW ›1.1/2"x1" Thk.3.68mmx3.38mm ASTM A403 Gr.WP316/316L	1163621	1724000839	00390	1163621	
102	00	1	B	01SS	6	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
102	00	1	B	01SS	7	1	Flange WN ›1.1/2" Thk.3.68mm 150LB RF ASTM A182 Gr.F316/316L	CH-17777	1724000839	00970	EXP/22-23/00790-12	
102	00	1	B	01SS	8	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
103	00	1	A	01SS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
103	00	1	A	01SS	3	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
103	00	1	A	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
103	00	1	A	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
103	00	1	A	01SS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
103	00	1	A	01SS	1B	0,815	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
103	00	1	B	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
103	00	1	B	01SS	5	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
103	00	1	B	01SS	1C	0,134	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
103	00	1	B	01SS	1D	1,246	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
104	00	1	A	01SS	2	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
104	00	1	A	01SS	1A	0,607	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
106	01	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
106	01	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
106	01	1	A	01SS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
106	01	1	A	01SS	1B	1,524	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
106	01	1	B	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
106	01	1	B	01SS	1C	0,681	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
107	00	1	A	01SS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
107	00	1	A	01SS	3	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
107	00	1	A	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
107	00	1	A	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
107	00	1	A	01SS	5	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
107	00	1	A	01SS	1A	0,105	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
107	00	1	A	01SS	1B	0,168	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
107	00	1	A	01SS	1C	1,205	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
108	00	1	A	01SS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
108	00	1	A	01SS	3	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
108	00	1	A	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
108	00	1	A	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
108	00	1	A	01SS	5	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
108	00	1	A	01SS	1A	0,057	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
108	00	1	A	01SS	1B	0,942	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
109	00	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
109	00	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
109	00	1	A	01SS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
109	00	1	A	01SS	1B	0,35	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
109	00	1	B	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
109	00	1	B	01SS	1C	0,65	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
110	00	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
110	00	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
110	00	1	A	01SS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
110	00	1	A	01SS	1B	1,524	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
110	00	1	B	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
110	00	1	B	01SS	1C	0,681	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
111	00	1	A	01SS	2	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
111	00	1	A	01SS	1A	0,607	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
112	01	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
112	01	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
112	01	1	A	01SS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
112	01	1	A	01SS	1B	1,524	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
112	01	1	B	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
112	01	1	B	01SS	1C	0,681	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
113	00	1	A	01SS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
113	00	1	A	01SS	3	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
113	00	1	A	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
113	00	1	A	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
113	00	1	A	01SS	1A	0,048	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
113	00	1	A	01SS	1B	0,5	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
113	00	1	B	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
113	00	1	B	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
113	00	1	B	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
113	00	1	B	01SS	5	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
113	00	1	B	01SS	1C	0,629	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
113	00	1	B	01SS	1D	0,239	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
113	00	1	B	01SS	1E	1,338	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
114	01	1	A	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
114	01	1	A	01CS	1A	0,1	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
114	01	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
114	01	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
114	01	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
114	01	1	B	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
114	01	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
114	01	1	B	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
114	01	1	B	01CS	1B	0,495	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
114	01	1	B	01CS	1C	0,424	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
114	01	1	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
114	01	1	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
114	01	1	C	01CS	1D	1,625	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
114	01	1	C	01CS	1E	0,499	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
114	01	1	D	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
114	01	1	D	01CS	4	1	Flange WN For Jackscrews ›1" Thk.4,55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01260	2024-C_MMF-01566	
114	01	1	D	01CS	1F	0,153	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
114	01	1	MONT	01CS	8	1	Reducer Concentric BW ›2"x1" Thk.5.54mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	0	1725000262	00010	9466-P35	
114	01	1	MONT	01CS	9	1	Reducer Concentric ASME B16.9 BW 6,02x5,54 WRS ASTM/ASME A/SA420 Gr.WPL6	0	1725000262	00020	9466-P35	
116	00	1	MONT	01HSS	3	1	Insulation Kit ›3" 150LB RF	0	1724000839	01520	49202466322840	
116	00	4	A	01HSS	1	1	Reducer Concentric BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	MR230609	1724001267	00320	MCP2401-00015-16	
116	00	4	A	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
116	00	4	A	01HSS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
116	00	4	A	01HSS	4	1	Flange WN ›3/4" Thk.2.87mm 150LB RF ASTM A182 Gr.F316/316L	CH-18532	1724000839	00950	EXP/22-23/01571-30	
117	00	1	MONT	01SD	1	1	Ball Valve Split Body FB 150LB FLG RF ›1" BS01F01RF	BLPH-MV-048	1724000798	00070	#N/D	
117	00	1	MONT	01SD	2	1	Air Release Valve FLG ›1" 150LB RF SP-0044	N/A	1724001062	00020	N/A	
117	00	1	MONT	01SD	3	2	Gasket Flat Thk. 3 mm ›1" 150LB RF NEOPRENE	N/A	1724001267	00190	1724001267	
117	00	1	MONT	01SD	4	8	Stud Bolt + 2 Heavy Nuts 1/2" L=65MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01670	3167558	
118	00	1	MONT	01SD	1	1	Ball Valve Split Body FB 150LB FLG RF ›1" BS01F01RF	BLPH-MV-051	1724000798	00070	#N/D	
118	00	1	MONT	01SD	2	1	Air Release Valve FLG ›1" 150LB RF SP-0043	N/A	1724001062	00010	N/A	
118	00	1	MONT	01SD	3	2	Gasket Flat Thk. 3 mm ›1" 150LB RF NEOPRENE	N/A	1724001267	00190	1724001267	
118	00	1	MONT	01SD	4	8	Stud Bolt + 2 Heavy Nuts 1/2" L=65MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	N/A	1724000839	01670	3167558	
119	00	1	A	01SS	2	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
119	00	1	A	01SS	3	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
119	00	1	A	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
119	00	1	A	01SS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
119	00	1	A	01SS	5	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
119	00	1	A	01SS	1A	1,116	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
119	00	1	A	01SS	1B	0,595	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
120	01	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›2" Thk.5.54mm ASTM/ASME A/SA420 Gr.WPL6	774	1724000839	00670	4527-P2	
120	01	1	A	01CS	4	1	Flange WN ›2" Thk.5.54mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70486	1724000839	01190	2024-C_MFF-01243	
120	01	1	A	01CS	1A	1,431	Pipe 60.3mm(2") thk.5.54mm ASTM/ASME A/SA333 Gr.6	R58853	1724000838	00020	E10065	
120	01	1	A	01CS	1B	0,068	Pipe 60.3mm(2") thk.5.54mm ASTM/ASME A/SA333 Gr.6	R58853	1724000838	00020	E10065	
121	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.5.54mm ASTM/ASME A/SA420 Gr.WPL6	774	1724000839	00670	4527-P2	
121	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›2" Thk.5.54mm ASTM/ASME A/SA420 Gr.WPL6	774	1724000839	00670	4527-P2	
121	00	1	A	01CS	3	1	Flange WN ›2" Thk.5.54mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70486	1724000839	01190	2024-C_MFF-01243	
121	00	1	A	01CS	1A	0,558	Pipe 60.3mm(2") thk.5.54mm ASTM/ASME A/SA333 Gr.6	R58853	1724000838	00020	E10065	
121	00	1	A	01CS	1B	0,1	Pipe 60.3mm(2") thk.5.54mm ASTM/ASME A/SA333 Gr.6	R58853	1724000838	00020	E10065	
122	01	1	A	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
122	01	1	A	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
122	01	1	A	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
122	01	1	A	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	
122	01	1	A	03HSS	1A	0,356	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
122	01	1	A	03HSS	1B	3,88	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
122	01	1	A	03HSS	1E	0,138	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
122	01	1	B	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
122	01	1	B	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
122	01	1	B	03HSS	3	1	Cap BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	519724	1724000839	00190	519724	
122	01	1	B	03HSS	9	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
122	01	1	B	03HSS	10	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
122	01	1	B	03HSS	1C	3,924	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
122	01	1	B	03HSS	1D	3,924	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
122	01	2	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
122	01	1	B	03HSS	1D	3,924	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
122	01	2	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
122	01	2	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
122	01	2	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
122	01	2	C	03HSS	1F	3,734	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
122	01	2	C	03HSS	1G	0,368	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
122	01	2	C	03HSS	1H	0,774	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
122	01	2	D	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
122	01	2	D	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
122	01	2	D	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	
122	01	2	D	03HSS	3	1	Cap BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	519724	1724000839	00190	519724	
122	01	2	D	03HSS	5	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	
122	01	2	D	03HSS	6	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
122	01	2	D	03HSS	1I	3,65	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
122	01	2	D	03HSS	1J	3,924	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
122	01	2	D	03HSS	1K	3,924	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
123	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
123	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
123	00	1	A	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
123	00	1	A	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
123	00	1	A	01CS	1A	0,174	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
123	00	1	A	01CS	1B	0,203	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
124	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
124	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
124	01	1	A	01CS	3	1	Flange WN For Jackscrews ›1" Thk.4,55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01260	2024-C_MMF-01566	
124	01	1	A	01CS	4	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
124	01	1	A	01CS	1A	0,201	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
124	01	1	A	01CS	1B	0,124	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
124	01	1	B	01CS	4	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
124	01	1	B	01CS	4	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
124	01	1	B	01CS	1C	0,277	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
126	00	1	A	01CS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
126	00	1	A	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
126	00	1	A	01CS	1A	1,185	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
126	00	1	B	01CS	2	1	Tee Reducing BW ›1"x3/4" Thk.4.55mmx3.91mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00800	4527-P15	
126	00	1	B	01CS	3	1	Nipple L=100mm TOE ›3/4" Thk.3,91mm ASTM/ASME A/SA333 Gr.6	SU1	1724001267	00240	003595	
126	00	1	B	01CS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
126	00	1	B	01CS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
126	00	1	B	01CS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
126	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
126	00	1	B	01CS	1C	1,677	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
126	00	1	B	01CS	1D	1,153	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
126	00	1	B	01CS	1E	0,861	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
127	00	1	A	01SS	4	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724001267	00080	MCP2404-00012-12	
127	00	1	A	01SS	4	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724001267	00080	MCP2404-00012-12	
127	00	1	A	01SS	1A	0,178	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
127	00	1	A	01SS	1B	1,103	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
127	00	1	A	01SS	1C	1,56	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
127	00	1	B	01SS	2	1	Tee Reducing BW ›1.1/2"x3/4" Thk.3.68mmx2.87mm ASTM A403 Gr.WP316/316L	12B258	1724000839	00610	10303342	
127	00	1	B	01SS	3	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	
127	00	1	B	01SS	4	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724001267	00080	MCP2404-00012-12	
127	00	1	B	01SS	4	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724001267	00080	MCP2404-00012-12	
127	00	1	B	01SS	4	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724001267	00080	MCP2404-00012-12	
127	00	1	B	01SS	1D	0,324	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
127	00	1	B	01SS	1E	0,191	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
127	00	2	C	01SS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724001267	00080	MCP2404-00012-12	
127	00	2	C	01SS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724001267	00080	MCP2404-00012-12	
127	00	2	C	01SS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724001267	00080	MCP2404-00012-12	
127	00	2	C	01SS	1F	4,21	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
127	00	2	C	01SS	1G	0,927	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
127	00	2	D	01SS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724001267	00080	MCP2404-00012-12	
127	00	2	D	01SS	1H	0,199	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
127	00	2	D	01SS	1I	1,836	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
127	00	2	E	01SS	2	1	Reducer Concentric BW ›2"x1.1/2" Thk.2.77mmx3.68mm ASTM A403 Gr.WP316/316L	LN007-1	1724001267	00340	PSA3-FT-49115	
127	00	2	E	01SS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724001267	00080	MCP2404-00012-12	
127	00	2	E	01SS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.3.68mm ASTM A403 Gr.WP316/316L	M230941	1724001267	00080	MCP2404-00012-12	
127	00	2	E	01SS	4	1	Flange WN ›2" Thk.2.77mm 150LB RF ASTM A182 Gr.F316/316L	DJ836	1724000839	00910	1000028548/52 REV.1	
127	00	2	E	01SS	1J	0,082	Pipe 48.3mm(1.1/2") thk.3.68mm ASTM A312 Gr.TP316/316L	235415	1724000839	00060	WSSL/SP-316L/00757/1023	
128	03	1	A	01CS	3	1	Tee Reducing BW ›12"x10" Thk.6.35mmx6.35mm ASTM/ASME A/SA420 Gr.WPL6	948456	1724000994	00260	1CL-08628	
128	03	1	A	01CS	4	1	Tee Reducing BW ›12"x8" Thk.6.35mmx6.35mm ASTM/ASME A/SA420 Gr.WPL6	453686	1724000994	00250	7015/22	
128	03	1	A	01CS	5	1	Cap BW ›12" Thk.6.35mm ASTM/ASME A/SA420 Gr.WPL6	633449	1724000994	00010	CE22012089_3.1_01	
128	03	1	A	01CS	6	1	Flange WN ›12" Thk.6.35mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/35031	1724000994	00120	2024-C_MMF-01283	
128	03	1	A	01CS	1A	0,5	Pipe 323.8mm(12") thk.6.35mm ASTM/ASME A/SA333 Gr.6	934090	1724000995	00050	01-23-11254	
128	03	1	A	01CS	1B	1,25	Pipe 323.8mm(12") thk.6.35mm ASTM/ASME A/SA333 Gr.6	934090	1724000995	00050	01-23-11254	
128	03	1	A	01CS	1C	3,706	Pipe 323.8mm(12") thk.6.35mm ASTM/ASME A/SA333 Gr.6	934090	1724000995	00050	01-23-11254	
128	03	1	A	01CS	2E	0,506	Pipe 273.0mm(10") thk.6.35mm ASTM/ASME A/SA333 Gr.6	1220575	1724000995	00040	0001	
128	03	1	A	01CS	2F	0,506	Pipe 273.0mm(10") thk.6.35mm ASTM/ASME A/SA333 Gr.6	1220575	1724000995	00040	0001	
128	03	1	A	01CS	STD S-222	1	PIPE - STD S-222	1220575	1724000995	00040	0001	
128	03	1	A	01CS	STD S-222	1	PIPE - STD S-222	1220575	1724000995	00040	0001	
128	03	1	B	01CS	6	1	Flange WN ›12" Thk.6.35mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/35031	1724000994	00120	2024-C_MMF-01283	
128	03	1	B	01CS	1D	6,428	Pipe 323.8mm(12") thk.6.35mm ASTM/ASME A/SA333 Gr.6	934090	1724000995	00050	01-23-11254	
129	02	1	A	01CS	2	1	Tee Reducing BW ›10"x4" Thk.6.35mmx6.02mm ASTM/ASME A/SA420 Gr.WPL6	981188	1724000994	00240	056189	
129	02	1	A	01CS	2	1	Tee Reducing BW ›10"x4" Thk.6.35mmx6.02mm ASTM/ASME A/SA420 Gr.WPL6	981188	1724000994	00240	056189	
129	02	1	A	01CS	4	1	Flange WN ›10" Thk.6.35mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/36388	1724000994	00110	2024-C_MMF-01283	
129	02	1	B	01CS	3	1	Weldolet BW ›10"x3" Thk.6.35mmx5.49mm ASTM/ASME A/SA350 Gr.LF2	280285	1724000994	00180	002445	
129	02	1	B	01CS	3	1	Weldolet BW ›10"x3" Thk.6.35mmx5.49mm ASTM/ASME A/SA350 Gr.LF2	280285	1724000994	00180	002445	
129	02	1	B	01CS	3	1	Weldolet BW ›10"x3" Thk.6.35mmx5.49mm ASTM/ASME A/SA350 Gr.LF2	280285	1724000994	00180	002445	
129	02	1	B	01CS	3	1	Weldolet BW ›10"x3" Thk.6.35mmx5.49mm ASTM/ASME A/SA350 Gr.LF2	280285	1724000994	00180	002445	
129	02	1	B	01CS	3	1	Weldolet BW ›10"x3" Thk.6.35mmx5.49mm ASTM/ASME A/SA350 Gr.LF2	280285	1724000994	00180	002445	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by		
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:		
Project	**Hollandse Kust Noord Wind Park Project**			
Job	**123A90**			
Discipline	**PIPING**			
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
129	02	1	B	01CS	3	1	Weldolet BW ›10"x3" Thk.6.35mmx5.49mm ASTM/ASME A/SA350 Gr.LF2	280285	1724000994	00180	002445	
129	02	1	B	01CS	1A	10,469	Pipe 273.0mm(10") thk.6.35mm ASTM/ASME A/SA333 Gr.6	1220575	1724000995	00040	0001	
129	02	1	B	01CS	1E	1,29	Pipe 273.0mm(10") thk.6.35mm ASTM/ASME A/SA333 Gr.6	1220575	1724000995	00040	0001	
129	02	1	C	01CS	3	1	Weldolet BW ›10"x3" Thk.6.35mmx5.49mm ASTM/ASME A/SA350 Gr.LF2	280285	1724000994	00180	002445	
129	02	1	C	01CS	8	1	90 Deg Elbow Long Radius BW ›10" Thk.6.35mm ASTM/ASME A/SA420 Gr.WPL6	X94J	1724000994	00050	2400051 027	
129	02	1	C	01CS	1B	0,54	Pipe 273.0mm(10") thk.6.35mm ASTM/ASME A/SA333 Gr.6	1220575	1724000995	00040	0001	
129	01	2	D	01CS	2	1	Weldolet BW ›10"x3" Thk.6.35mmx5.49mm ASTM/ASME A/SA350 Gr.LF2	280285	1724000994	00180	002445	
129	01	2	D	01CS	2	1	Weldolet BW ›10"x3" Thk.6.35mmx5.49mm ASTM/ASME A/SA350 Gr.LF2	280285	1724000994	00180	002445	
129	01	2	D	01CS	3	1	90 Deg Elbow Long Radius BW ›10" Thk.6.35mm ASTM/ASME A/SA420 Gr.WPL6	X94J	1724000994	00050	2400051 027	
129	01	2	D	01CS	1C	1,408	Pipe 273.0mm(10") thk.6.35mm ASTM/ASME A/SA333 Gr.6	1220575	1724000995	00040	0001	
129	01	2	D	01CS	1D	2,788	Pipe 273.0mm(10") thk.6.35mm ASTM/ASME A/SA333 Gr.6	1220575	1724000995	00040	0001	
130	01	1	A	01CS	2	1	Weldolet BW ›8"x3" Thk.6.35mmx5.49mm ASTM/ASME A/SA350 Gr.LF2	280285	1724000994	00170	002445	
130	01	1	A	01CS	2	1	Weldolet BW ›8"x3" Thk.6.35mmx5.49mm ASTM/ASME A/SA350 Gr.LF2	280285	1724000994	00170	002445	
130	01	1	A	01CS	2	1	Weldolet BW ›8"x3" Thk.6.35mmx5.49mm ASTM/ASME A/SA350 Gr.LF2	280285	1724000994	00170	002445	
130	01	1	A	01CS	2	1	Weldolet BW ›8"x3" Thk.6.35mmx5.49mm ASTM/ASME A/SA350 Gr.LF2	280285	1724000994	00170	002445	
130	01	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›8" Thk.6.35mm ASTM/ASME A/SA420 Gr.WPL6	W25A	1724000994	00040	2400051 025	
130	01	1	A	01CS	4	1	Flange WN ›8" Thk.6.35mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/39601	1724000994	00100	2024-C_MMF-01283	
130	01	1	A	01CS	1A	10,356	Pipe 219.1mm(8") thk.6.35mm ASTM/ASME A/SA333 Gr.6	1220140	1724000995	00030	1127	
130	01	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›8" Thk.6.35mm ASTM/ASME A/SA420 Gr.WPL6	W25A	1724000994	00040	2400051 025	
130	01	1	B	01CS	1B	1,56	Pipe 219.1mm(8") thk.6.35mm ASTM/ASME A/SA333 Gr.6	1220140	1724000995	00030	1127	
130	01	1	C	01CS	3	1	90 Deg Elbow Long Radius BW ›8" Thk.6.35mm ASTM/ASME A/SA420 Gr.WPL6	W25A	1724000994	00040	2400051 025	
130	01	1	C	01CS	1C	1,681	Pipe 219.1mm(8") thk.6.35mm ASTM/ASME A/SA333 Gr.6	1220140	1724000995	00030	1127	
130	01	1	C	01CS	1D	0,562	Pipe 219.1mm(8") thk.6.35mm ASTM/ASME A/SA333 Gr.6	1220140	1724000995	00030	1127	
131	01	1	A	01CS	2	1	Tee Reducing BW ›4"x3" Thk.6.02mmx5.49mm ASTM/ASME A/SA420 Gr.WPL6	J4KB349	1724000994	00230	20500799	
130	01	1	C	01CS	1D	0,562	Pipe 219.1mm(8") thk.6.35mm ASTM/ASME A/SA333 Gr.6	1220140	1724000995	00030	1127	
131	01	1	A	01CS	2	1	Tee Reducing BW ›4"x3" Thk.6.02mmx5.49mm ASTM/ASME A/SA420 Gr.WPL6	J4KB349	1724000994	00230	20500799	
131	01	1	A	01CS	2	1	Tee Reducing BW ›4"x3" Thk.6.02mmx5.49mm ASTM/ASME A/SA420 Gr.WPL6	J4KB349	1724000994	00230	20500799	
131	01	1	A	01CS	4	1	Flange WN ›4" Thk.6.02mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	022203591	1724000994	00090	2024-C_MMF-01283	
131	01	1	A	01CS	1A	5,84	Pipe 114.3mm(4") thk.6.02mm ASTM/ASME A/SA333 Gr.6	1234140	1724000995	00020	24A2347	
131	01	1	A	01CS	1D	2,299	Pipe 114.3mm(4") thk.6.02mm ASTM/ASME A/SA333 Gr.6	1234140	1724000995	00020	24A2347	
131	01	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.6.02mm ASTM/ASME A/SA420 Gr.WPL6	X98Z	1724000994	00020	24-01511	
131	01	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.6.02mm ASTM/ASME A/SA420 Gr.WPL6	X98Z	1724000994	00020	24-01511	
131	01	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.6.02mm ASTM/ASME A/SA420 Gr.WPL6	X98Z	1724000994	00020	24-01511	
131	01	1	B	01CS	1B	0,131	Pipe 114.3mm(4") thk.6.02mm ASTM/ASME A/SA333 Gr.6	1234140	1724000995	00020	24A2347	
131	01	1	B	01CS	1C	0,496	Pipe 114.3mm(4") thk.6.02mm ASTM/ASME A/SA333 Gr.6	1234140	1724000995	00020	24A2347	
132	01	1	A	01CS	2	1	Tee Reducing BW ›4"x3" Thk.6.02mmx5.49mm ASTM/ASME A/SA420 Gr.WPL6	J4KB349	1724000994	00230	20500799	
132	01	1	A	01CS	2	1	Tee Reducing BW ›4"x3" Thk.6.02mmx5.49mm ASTM/ASME A/SA420 Gr.WPL6	J4KB349	1724000994	00230	20500799	
132	01	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›4" Thk.6.02mm ASTM/ASME A/SA420 Gr.WPL6	X98Z	1724000994	00020	24-01511	
132	01	1	A	01CS	4	1	Flange WN ›4" Thk.6.02mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	022203591	1724000994	00090	2024-C_MMF-01283	
132	01	1	A	01CS	1A	5,84	Pipe 114.3mm(4") thk.6.02mm ASTM/ASME A/SA333 Gr.6	1234140	1724000995	00020	24A2347	
132	01	1	A	01CS	1B	1,872	Pipe 114.3mm(4") thk.6.02mm ASTM/ASME A/SA333 Gr.6	1234140	1724000995	00020	24A2347	
132	01	1	A	01CS	1C	0,443	Pipe 114.3mm(4") thk.6.02mm ASTM/ASME A/SA333 Gr.6	1234140	1724000995	00020	24A2347	
133	02	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
133	02	1	A	01CS	1A	0,218	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
133	02	1	A	01CS	1B	0,888	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
134	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
134	01	1	A	01CS	1A	0,278	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
134	01	1	A	01CS	1B	0,888	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
135	02	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
135	02	1	A	01CS	1A	0,218	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
135	02	1	A	01CS	1B	0,888	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
136	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
136	01	1	A	01CS	1A	0,278	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
136	01	1	A	01CS	1B	0,888	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
137	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
137	01	1	A	01CS	1A	0,205	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
137	01	1	A	01CS	1B	4,295	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by		
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:		
Project	**Hollandse Kust Noord Wind Park Project**			
Job	**123A90**			
Discipline	**PIPING**			
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
137	01	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
137	01	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
137	01	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
137	01	1	B	01CS	1C	0,226	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
137	01	1	B	01CS	1D	6,173	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
137	01	1	B	01CS	1E	3,586	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
138	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
138	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
138	01	1	A	01CS	1A	0,702	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
138	01	1	A	01CS	1B	1,672	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
138	01	1	A	01CS	1C	0,1	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
139	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
139	01	1	A	01CS	1A	0,71	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
139	01	1	A	01CS	1B	0,107	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
139	01	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
139	01	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
139	01	1	B	01CS	1C	0,872	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
139	01	1	B	01CS	1D	0,1	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
140	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
140	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
140	01	1	A	01CS	1A	0,747	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
140	01	1	A	01CS	1B	1,672	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
140	01	1	A	01CS	1C	0,1	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
141	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
140	01	1	A	01CS	1C	0,1	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
141	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
141	01	1	A	01CS	1A	0,755	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
141	01	1	A	01CS	1B	0,102	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
141	01	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
141	01	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
141	01	1	B	01CS	1C	0,872	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
141	01	1	B	01CS	1D	0,1	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
142	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
142	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
142	01	1	A	01CS	1A	0,792	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
142	01	1	A	01CS	1B	1,672	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
142	01	1	A	01CS	1C	0,1	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
143	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
143	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
143	01	1	A	01CS	1A	0,771	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
143	01	1	A	01CS	1B	0,101	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
143	01	1	A	01CS	1C	3,011	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
143	01	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
143	01	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
143	01	1	B	01CS	1D	1,344	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
143	01	1	B	01CS	1E	0,1	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
144	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
144	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
144	01	1	A	01CS	1A	0,822	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
144	01	1	A	01CS	1B	1,561	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
144	01	1	A	01CS	1C	0,1	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
145	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
145	01	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
145	01	1	A	01CS	1A	0,871	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
145	01	1	A	01CS	1B	0,342	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
145	01	1	A	01CS	1C	0,1	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
146	02	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by		
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:		
Project	**Hollandse Kust Noord Wind Park Project**			
Job	**123A90**			
Discipline	**PIPING**			
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
146	02	1	A	01CS	1A	0,675	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
146	02	1	A	01CS	1B	1,632	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
147	02	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
147	02	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
147	02	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
147	02	1	A	01CS	1A	0,294	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
147	02	1	A	01CS	1B	0,101	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
147	02	1	A	01CS	1C	2,372	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
147	02	1	A	01CS	1D	0,1	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
148	02	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
148	02	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
148	02	1	A	01CS	1A	0,595	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
148	02	1	A	01CS	1B	0,1	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
148	02	1	A	01CS	1C	1,632	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
149	02	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
149	02	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	
149	02	1	A	01CS	1A	0,235	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
149	02	1	A	01CS	1B	0,872	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
149	02	1	A	01CS	1C	0,1	Pipe 88.9mm(3") thk.5.49mm ASTM/ASME A/SA333 Gr.6	A17548	1724000995	00010	E14315	
150	00	1	A	01SD	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.3,68mmx3,38mm ASTM A815 UNS S32760	1004SA024	1724001828	00120	1004SA024	
150	00	1	A	01SD	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A815 UNS S32760	1035SA022	1724000839	00240	1035SA022	
150	00	1	A	01SD	4	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
150	00	1	B	01SD	4	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
150	00	1	B	01SD	4	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
150	00	1	B	01SD	4	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
150	00	1	B	01SD	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A790 UNS S32760	BC2877	1724000839	00010	751007	
150	00	1	B	01SD	4	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
150	00	1	B	01SD	4	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
150	00	1	B	01SD	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A790 UNS S32760	BC2877	1724000839	00010	751007	
151	01	1	A	01SD	2	1	45 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A815 UNS S32760	1080SA023	1724001828	00020	1080SA023	
151	01	1	A	01SD	3	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A815 UNS S32760	1031SA024	1724001828	00030	1031SA024	
151	01	1	A	01SD	4	1	Flange WN For Jackscrews ›2" Thk.2,77mm 150LB RF ASTM A182 Gr.F55	555304	1724000839	00880	770	
151	01	1	A	01SD	1A	2,112	Pipe 60.3mm(2") thk.2.77mm ASTM A790 UNS S32760	59769	1724001828	00110	749303	
152	00	1	A	01SD	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.3,68mmx3,38mm ASTM A815 UNS S32760	1004SA024	1724001828	00120	1004SA024	
152	00	1	A	01SD	3	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A815 UNS S32760	1035SA022	1724000839	00240	1035SA022	
152	00	1	A	01SD	4	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
152	00	1	B	01SD	4	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
152	00	1	B	01SD	4	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
152	00	1	B	01SD	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A790 UNS S32760	BC2877	1724000839	00010	751007	
153	01	1	A	01SD	2	1	45 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A815 UNS S32760	1080SA023	1724001828	00020	1080SA023	
153	01	1	A	01SD	3	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A815 UNS S32760	1031SA024	1724001828	00030	1031SA024	
153	01	1	A	01SD	4	1	Flange WN For Jackscrews ›2" Thk.2,77mm 150LB RF ASTM A182 Gr.F55	555304	1724000839	00880	770	
153	01	1	A	01SD	1A	2,112	Pipe 60.3mm(2") thk.2.77mm ASTM A790 UNS S32760	59769	1724001267	00290	769303	
154	00	1	A	01SD	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A815 UNS S32760	1035SA022	1724000839	00240	1035SA022	
154	00	1	A	01SD	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
154	00	1	A	01SD	1A	0,305	Pipe 33.4mm(1") thk.3.38mm ASTM A790 UNS S32760	BC2877	1724000839	00010	751007	
154	00	1	B	01SD	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
154	00	1	B	01SD	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F55	407642	1724000839	00870	770	
154	00	1	B	01SD	1B	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A790 UNS S32760	BC2877	1724000839	00010	751007	
155	01	1	A	01SD	2	1	90 Deg Elbow Long Radius BW ›2" Thk.2.77mm ASTM A815 UNS S32760	1031SA024	1724001828	00030	1031SA024	
155	01	1	A	01SD	3	1	Flange WN For Jackscrews ›2" Thk.2,77mm 150LB RF ASTM A182 Gr.F55	555304	1724000839	00880	770	
155	01	1	A	01SD	1A	2,264	Pipe 60.3mm(2") thk.2.77mm ASTM A790 UNS S32760	59769	1724001267	00290	769303	
156	00	1	A	01CS	3	1	Reducer Concentric BW ›1"x3/4" Thk.4.55mmx3.91mm ASTM/ASME A/SA420 Gr.WPL6	56-123056	1724000839	00730	4527-P8	
156	00	1	A	01CS	5	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
156	00	1	A	01CS	6	1	Flange WN For Jackscrews ›1" Thk.4,55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01260	2024-C_MMF-01566	
156	00	1	A	01CS	7	1	Flange WN ›3/4" Thk.3,91mm 150LB FF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724001828	00070	2024-C_MFF-02265	

Empolyer/Contractor	**CROSSWIND**	Preparato da/Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90**		
Discipline	**PIPING**		
DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	Data/Date: 03/04/2026
RosettiDoc.Num.	**123A90-MTR-002**		

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Note
156	00	1	A	01CS	1A	0,098	Pipe 26,7mm(3/4") thk.3.91mm ASTM/ASME A/SA333 Gr.6	129308	1724000838	00040	0000360564/1	
156	00	1	B	01CS	4	1	Reducer Concentric BW ›3/4"x1/2" Thk.3.91mmx3.73mm ASTM/ASME A/SA420 Gr.WPL6	0F-0F2350	1724000839	00720	4527-P7	
156	00	1	B	01CS	7	1	Flange WN ›3/4" Thk.3,91mm 150LB FF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724001828	00070	2024-C_MFF-02265	
156	00	1	B	01CS	8	1	Flange WN ›1/2" Thk.3,73mm 150LB FF ASTM/ASME A/SA350 Gr.LF2	22/75635	1724001828	00060	2024-C_MFF-02265	
156	00	1	B	01CS	1B	0,344	Pipe 26,7mm(3/4") thk.3.91mm ASTM/ASME A/SA333 Gr.6	129308	1724000838	00040	0000360564/1	
156	00	1	C	01CS	8	1	Flange WN ›1/2" Thk.3,73mm 150LB FF ASTM/ASME A/SA350 Gr.LF2	22/75635	1724001828	00060	2024-C_MFF-02265	
156	00	1	C	01CS	2C	0,075	Pipe 21.3mm(1/2") thk.3.73mm ASTM/ASME A/SA333 Gr.6	720280	1724000838	00060	02-23-29899	
157	00	1	A	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
157	00	1	A	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
157	00	1	A	01HSS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	
157	00	1	A	01HSS	1A	0,28	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
157	00	1	A	01HSS	1B	0,839	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
157	00	1	B	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
157	00	1	B	01HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	
157	00	1	B	01HSS	1C	1,194	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
157	00	1	B	01HSS	1D	0,077	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223	
158	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
158	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
158	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
158	00	1	A	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	
158	00	1	A	01CS	1A	0,127	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
158	00	1	A	01CS	1B	0,55	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
158	00	1	A	01CS	1C	0,418	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
158	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
158	00	1	A	01CS	1C	0,418	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	
158	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
158	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	
158	00	1	B	01CS	1D	4,512	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938	

3 MATERIAL CERTIFICATES

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724000839	123A90A	Q012400453

ROSETTI MARINO

ROSETTI MARINO
Conforme alla spec. PO
According to the spc.
TMUGF Firma / MTSMD Signature: Sonia Emiliani
Data / Date: 21/06/2024
Sonia Emiliani
☒ REVIEW
☐ WITNESS

CUSTOMER

NOTE

raccortubi

00005381

12/06/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
130	NR	4	0,00	Weldolet BW diam.10"x2" Thk.4.19mmx2.77mm ASTM A182 Gr.F316/316L	BAJV
140	NR	3	0,00	Weldolet BW diam.6"x1" Thk.3.4mmx3.38mm ASTM A182 Gr.F316/316L	BAKV
150	NR	5	0,00	Weldolet BW diam.10"x1" Thk.4.19mmx3.38mm ASTM A182 Gr.F316/316L	BAKV
160	NR	1	0,00	NipoFlange Reinforced diam.2"x3/4" Thk.2,77mmx2,87mm 150LB RF ASTM A182 Gr.F316/316L	278443
				FLANGE IN ACCIAIO INOX ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	
1070	NR	4	0,00	W.N. 1.1/4" S.150 RF SCH.10/S	DB166

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

ITALTEST NDT CONTROLLI E COLLAUDI INDUSTRIALI SETTIMO MILANESE – LEGNANO (MI) www.italtest.it	RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI LIQUID PENETRANT TEST REPORT	50 dal 1965 CERT. ISO 9001 LRC0100763/QMS	N° 4.136 / 2024 PAGINA DI PAGINE Page 1 of 2 Pages

CLIENTE Customer RACCORTUBI S.p.A.	ORDINE Order 1724000839 - 22.04.24	COMMESSA Job 00002010

OGGETTO
Object SEE PAGE 2

SPECIFICA GENERALE General specification	PIANO DI CONTROLLO Control Plan	FASE Phase	CRITERIO D'ACCETTAZIONE Acceptance Standards
ASME V ART.6			ASME VIII DIV.1 APP.8
PROCEDURA Procedure	**MATERIALE** Material	**DISEGNO FIG.** Drawing Fig.	**% CONTROLLATA** Extent %
	SEE PAGE 2		100% SURFACE

CONDIZIONE SUPERFICE Surface Conditions	SALDATO As Welded	MOLATO Ground	LAVORATO Machined	FORGIATO As Forged X	FUSO As Cast

STATO DEL MATERIALE Material Status	PRIMA DEL T.T. Before Heat Treatment	DOPO T.T. After Heat Treatment	DOPO RIPARAZIONE After Repair

DATI DELLA PROVA
Test Data

METODO DI PULIZIA
Precleaning Method SOLVENT AND PAPER

TECNICA Technique	CONTRASTO DI COLORE Color Contrasting X	FLUORESCENTE Fluorescent
	ILLUMINAZIONE White Light Intensity 1200 lx	ILLUMINAZIONE Black Light Intensity

METODO DI ISPEZIONE Liquid Penetrant Inspection Method						
MARCA Brand N.D.T.		PENETRANTE Penetrant	SPRAY Spray X	LOTTO Batch 210115Ps	SCADENZA Expiry 02/2025	
TIPO Type	LAVABILE IN ACQUA Water Washable X		PENNELLO Brush	LOTTO Batch	SCADENZA Expiry	
	POST EMULSIONABILE Post Emulsifiable	RIVELATORE Developer	SECCO Dry	LOTTO Batch	SCADENZA Expiry	
	RIMOVIBILE CON SOLVENTE Solvent Removable		UMIDO Wet X	LOTTO Batch 230206W150s	SCADENZA Expiry 01/2027	

TEMPO DI PENETRAZIONE Dwell Time 20 MINUTE	METODO DI PULIZIA Cleaning Method WATER AND PAPER
TEMPO DI SVILUPPO Developing Time 10 MINUTE	METODO DI PULIZIA Cleaning Method WATER AND PAPER

RISULTATI DELLA PROVA
Test Results

SENZA DIFETTI No Defects X	DIFETTI ACCETTABILI Accettable Defects	DIFETTI NON ACCETTABILI Unaccepptable Defects

OSSERVAZIONI O DESCRIZIONE DELLE INDICAZIONI
Description Of Defects, Size And Location

RISULTATI Results	CONFORME ALLA SPECIFICA According To Specification X	NON CONFORME ALLA SPECIFICA Not According To Specification	SCARTO Scrap

NOTE
Notes

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 DATA Date 11 / 06 / 2024 RT	ROSETTI MARINO Supply Management Dept. ☑ Witness ☑ Review DATA Date	DATA Date

ITALTEST NDT

CONTROLLI E COLLAUDI INDUSTRIALI

SETTIMO MILANESE – LEGNANO (MI) www.italtest.it

RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI

LIQUID PENETRANT TEST REPORT

50 dal 1985

CERT. ISO 9001 LRC0100763/QMS

N° 4.136 / 2024

PAGINA DI PAGINE
Page 2 of 2 Pages

CLIENTE Customer	ORDINE Order	COMMESSA Job
RACCORTUBI S.p.A.	1724000839 - 22.04.2024	00002010

ITEM Item	Q.TÀ Q.ty	DESCRIZIONE Description	MATERIALE Material	COLATA Heat
1070	4	W.N. 1 ¼" S.150 RF SCH.10/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GR. F316/316L	DB166
130	4	WELDOLET BW 10"x 2" Thk. 4.19 x 2.77 mm	ASTM A-182 GR. F316/316L	BAJV
140	3	WELDOLET BW 6"x 1" Thk. 3.4 x 3.38 mm	ASTM A-182 GR. F316/316L	BAKV
150	5	WELDOLET BW 10"x 1" Thk. 4.19 x 3.38 mm	ASTM A-182 GR. F316/316L	BAKV
160	1	NIPOFLANGE REINFORCED 2"x ¾" Thk. 2.77 x 2.87 mm 150LB RF ASTM	ASTM A-182 GR. F316/316L	278443
-	-	-	-	-

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT	ROSETTI MARINO Supply Management Dept. ☐ Witness ☐ Review	
DATA Date 11 / 06 / 2024	DATA Date	DATA Date

raccortubi

00005381

12/06/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator
Colaulo Stefano

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	Q.ta' *Q.ty*	U.M.	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
130	4	NR	Weldolet BW diam.10"x2" Thk.4.19mmx2.77mm ASTM A182 Gr.F316/316L	BAJV
140	3	NR	Weldolet BW diam.6"x1" Thk.3.4mmx3.38mm ASTM A182 Gr.F316/316L	BAKV
150	5	NR	Weldolet BW diam.10"x1" Thk.4.19mmx3.38mm ASTM A182 Gr.F316/316L	BAKV
160	1	NR	NipoFlange Reinforced diam.2"x3/4" Thk.2,77mmx2,87mm 150LB RF ASTM A182 Gr.F316/316L	278443
			FLANGE IN ACCIAIO INOX ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	
1070	4	NR	W.N. 1.1/4" S.150 RF SCH.10/S	DB166

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

M.E.G.A.

INSPECTION CERTIFICATE
Certificato d'ispezione

REPORT N. / Rapporto N.	TC-030146-23-0006	Issued on / Revised on	23/11/2023	Customer		Job n. / Com. n.	30146
Revision / Revisione	0	According to / In accordo a	EN 10204:2004 / UNI EN 10204:2005	Type / Tipo	3.1	Page n. / Pagina n.	1 of 2
						Purchase order and project/Ordine e progetto	PUR-IOX02550MA

DESCRIPTION / DESCRIZIONE

Test Prova	Item Pos.	Qty Q.tà	Customer code Codice cliente	Material Materiale	Heat Colata	Product Prodotto
BAJV	10	24	WEL6L-210-3	ASTM A182/23 F316/316L	286213	MEGALET Sch.10S A/SA182 F316/L 2x8-80
AQWN	21	25	WEL4L-240-2	ASTM A182/23 F304/304L	538678	MEGALET Sch.40S A/SA182 F304/L 2x3.1/2-6

Test Prova	STEEL MELTING AND HEAT TREATMENT DATA / Dettagli di produzione e trattamento termico	CTY of melt	RAW AND FORGING MATERIAL CERTIFICATES / Certificati di acciaieria/forgia	Ref. to MEGA-LAB Mechanical Test
BAJV	ELECT.FURN.-SOLUT.ANNEALED at 1060^C WATER QUENCHED CERT 8958.MEGA	IT	MEST871377/2022/ by VALBRUNA / FC-011784-21-0055 by M.E.G.A. S.P.A.	MC-000000-22-728
AQWN	ELECT.FURN.-SOLUT.ANNEALED at 1060^C WATER QUENCHED CERT HTR.9758.MEGA	ES	492347 by OLARRA / FC-011784-21-0302 by M.E.G.A. S.P.A.	MC-000000-23-0060

Test	Test loc.	Orient.	TENSILE TEST AT ROOM TEMPERATURE / Trazione a temperatura ambiente						CVN IMPACT TEST (KV) / Prova di resilienza					Bend [B]	Hardness	Grain
			Specimen / Provino			Yield strength	Tensile strength	Elongation	Red. Of Area	Dimens.	T	Abs. Energy	Shear A	Lat Exp	Flatt. [F]	Durezza	Size
Prova	Preso a	Direz.	Shape / Forma	A Sez.[mm²]	Gage Length Lungh.[mm]	Sner. [Mpa] Min:	Rottura [Mpa] Min:	Allung. [%] Min:	Contraz. [%] Min:	Dimens. [mm]	Temp. [°C]	Energia ass. [J]	Area d [%]	Esp. Lat. [mm]	Piega Schiacc.	[HBW2.5/187.5]	Dimens. grano
BAJV	T/2	TRANS	Round	31.100	25.000	278.700	582.800	53.800	71.600				--	--		164-169	
AQWN	T/2	TRANS	Round	30.900	25.000	492.100	627.900	53.300	72.000				--	--		173-183	

Test	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Al	H	Nb	N	Sn	O	B	Fe	Zr	CE[A]	PREN[B]	CEs[E]	J fact.[D]
Prova	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]
BAJV	0.0100	0.5300	1.5100	0.0290	0.0300	16.6500	10.0700	2.0600							0.0600							24.4080		
AQWN	0.0130	0.3700	1.5000	0.0270	0.0390	18.1000	8.0800								0.0840							19.4440		

REMARKS / Note

1: MATERIAL ACCORDING TO NACE MR0175/ISO 15156-1-2-3 Ed.2020,NACE MR0103 Ed.2015, 2014/68/EU (PED)
2: MATERIAL ACCORDING TO ASME Sect. II Part A 2021 Edition.
3: MATERIAL CAPABLE OF PASSING AN INTERGRANULAR CORROSION A262 Pr.E PMI 100% ON RAW MATERIAL: SATISFACTORY
4: MATERIALS ARE FREE FROM MERCURY CONTAMINATION AND RADIOACTIVITY

A: CE = C + Mn/6 + (Cr+Mo+V)/5 + (Cu+Ni)/15 | B: PREN = Cr + 3.3Mo + 16N
C: X factor = (10P + 5Sb+4Sn+As)/100 - elements expressed in ppm
D: J factor = ((Mn + Si)(P + Sn)) x 10E4 | E: CEs = C + Mn/6

Additional elements: 'BAJV': Co 0.2110 | 'AQWN': Co 0.1600 |

Quality Control Inspector
Certification department
Ispettore controllo qualità

Emmanuel Centemeri

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Customer: ROSETTI MARINO S.p.A.
Description: Weldolet BW diam.10"x2" Thk.4.19mmx2.77mm ASTM A182 Gr.F316/316L
Order: 1724000839 - 22.04.24 - Item n.: 130 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020 10
raccortubi Heat num. or Pcs. marking: BAJV - Qty:4.00
Protocol: CTCERC2024000053 81 • CERTIFIED TRUE COPY • Issued 12-06-2024
CTCERT2024000038 65.1.0001

M.E.G.A.

INSPECTION CERTIFICATE
Certificato d'ispezione

REPORT N. / Rapporto N.	TC-030146-23-0006	Issued on / Revised on	23/11/2023	Customer		Job n. / Com. n. 30146	Page n./ Pagina n. 2 of 2
Revision / Revisione	0	According to / In accordo a	EN 10204:2004 / UNI EN 10204:2005	Type / Tipo	3.1	Purchase order and project/Ordine e progetto	PUR-IOX02550MA

We hereby certify that all items supplied for the above purchase orders meet all the requirements of the applicable specification of manufacture, the purchase item descriptions, purchase specifications and purchase order requirements. Visual, dimensional and marking check of items supplied has been carried out by our internal inspectors with satisfactory results.
The chemical and mechanical values shown on this EN 10204 certificate are true copy of the mill test certificate issued by the steel mill, or by the laboratory that determined them.
All material is certified to be mercury free and free from radioactivity contamination. No weld repair was performed. Marking was performed by low stress stamps in accordance with MSS SP25 Ed. 2018.

Manufacturing standards:
- 45° and 90° elbows, tees, crosses, full and half couplings, caps, square, hexagonal and round plugs, hexagonal and flush bushings, welding bosses are manufactured in accordance with ASMEB.16.11 Ed. 2021; threads in accordance with ANSI/ASME B1.20.1 Ed. 2013 (R 2018)
- Outlet branches are manufactured in accordance with: ASME B.31.1 Ed. 2022, B.31.3 Ed. 2022 and MSS SP 97 Ed. 2019 and ASME B.31.8 Ed. 2022
- Seamless swage nipples are manufactured in accordance with: BS 3799-74 or MSS SP 95 Ed. 2018
- Seamless pipe nipples are manufactured in accordance with: B36.10 Ed. 2022 or B36.19 Ed. 2022
- Flanged outlet branches are manufactured in accordance with: ASME B.31.1 Ed. 2022, B.31.3 Ed. 2022 and B.16.5 Ed. 2020
- Unions are manufactured in accordance with: BS 3799-74 or MSS SP 83 Ed. 2018

When the length of flanged nipolet is not specified in the description, it is 150 mm.
The material is according to ASTM and ASME Boiler and Pressure Vessel Code Section II.
When the Edition/Revision of the listed standards is not mentioned, it is the latest.
Austenitic, duplex stainless steels and nickel alloy have been pickled and passivated. Machined surfaces do not require pickling and passivation.
M.E.G.A. is approved with certificate DGR-0036-QS-W 75/2002/MUC by T.U.V. (certification Body N.0036) to issue certificate of specific product control in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex 1, Section 4.3.

Test results are relevant only to the specimens belonging to the indicated heat, batch and material.
- Tensile test: ASTM A370 paragraph 6. Elongation determined after fracture, Yield strength determined by 0.2% off-set method
- Impact test: ASTM A370 Paragraph 20 / ASTM E23
- Hardness test: ASTM E10 (HBW); ASTM E92 (HV10); ASTM E18 (HRC)
- Chemical analysis: ASTM E415 and E1086
- Grain size determined according to ASTM E112

The product are manufactured in Italy.

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trademark M.E.G.A. is printed in green color.

Quality Control Inspector Certification department Ispettore controllo qualità	Emmanuel Centemeri

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

raccortubi

Customer: ROSETTI MARINO S.p.A.
Description: Weldolet BW diam.10"x2" Thk.4.19mmx2.77mm ASTM A182 Gr.F316/316L
Heat num. or Pos. marking: BAJV - Qty:4.00
Order: 1724000839 - 22.04.24 - Item n.: 130 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEITI20240002010
Protocol: CTCERC20240000538 1 * CERTIFIED TRUE COPY * Issued 12-06-2024

CTCERT20240000003866.1.0001

M.E.G.A.

INSPECTION CERTIFICATE
Certificato d'ispezione

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = ISO 9001:2015 =

REPORT N. / Rapporto N.	TC-029860-23-0001	Issued on / Revised on	22/02/2023	Customer / Cliente		Job n. / Com. n.	29860	Page n. / Pagina n.	
Revision / Revisione	0	According to / In accordo a	EN 10204:2004 UNI EN 10204:2005	Type / Tipo	3.1	Purchase order and project/Ordine e progetto	PUR-IOX01132MA		

DESCRIPTION / DESCRIZIONE

Test / Prova	Item / Pos.	Qty / Q.tà	Customer code / Codice cliente	Material / Materiale	Heat / Colata	Product / Prodotto
BAKV	5	100	WEL6L-140-2	ASTM A182-22a F316/316L	1KAP	MEGALET Sch.40S A/SA182 F316/L 1x3-80
AXAB	6	20	WEL6L-180-1	ASTM A182-22a F316/316L	0AWP	MEGALET Sch.80S A/SA182 F316/L 1x1.1/4-2.1/2
AVHH	7	30	WEL4L-1280-1	ASTM A182-22a F304/304L	501395	MEGALET Sch.80S A/SA182 F304/L 1/2x3/4-80
AXBN	8	50	WEL4L-140-1	ASTM A182-22a F304/304L	ZSPW	MEGALET Sch.40S A/SA182 F304/L 1x1.1/4-2.1/2
AXAA	9	50	WEL4L-140-2	ASTM A182-22a F304/304L	ZSPW	MEGALET Sch.40S A/SA182 F304/L 1x3-80

Test / Prova	STEEL MELTING AND HEAT TREATMENT DATA / Dettagli di produzione e trattamento termico	CTY of melt	RAW AND FORGING MATERIAL CERTIFICATES / Certificati di acciaieria/forgia	Ref. to MEGA-LAB Mechanical Test
BAKV	ELECT.FURN.-SOLUT.ANNEALED at 1060 C-WATER QUENCHED CERT 8957.MEGA	ES	2021/034777 by ROLDAN / FC-011784-21-0056 by M.E.G.A. S.P.A.	MC-000000-22-728
AXAB	ELECT.FURN.-SOLUT.ANNEALED at 1060 C-WATER QUENCHED CERT 7852.MEGA	ES	2021/000972 by ROLDAN / FC-011173-19-0339 by M.E.G.A. S.P.A.	MC-000000-21-0352
AVHH	ELECT.FURN.-SOLUT.ANNEALED at 1060^C WATER QUENCHED CERT 7134 MEGA	ES	428719 by OLARRA / FC-011173-19-0181 by M.E.G.A. S.P.A.	MC-000000-20-0733
AXBN	ELECT.FURN.-SOLUT.ANNEALED at 1060 C-WATER QUENCHED CERT HTR.7853.MEGA	ES	2020/016209 by ROLDAN / FC-011173-19-0355 by M.E.G.A. S.P.A.	MC-000000-21-0352
AXAA	ELECT.FURN.-SOLUT.ANNEALED at 1060 C-WATER QUENCHED CERT HTR.7790.MEGA	ES	2020/016209 by ROLDAN / FC-011173-19-0368 by M.E.G.A. S.P.A.	MC-000000-21-0361

Test	Test loc.	Orient.	TENSILE TEST AT ROOM TEMPERATURE / Trazione a temperatura ambiente						CVN IMPACT TEST (KV) / Prova di resilienza					Bend [B]	Hardness	Grain
			Specimen / Provino			Yield strength	Tensile strength	Elongation	Red. Of Area	Dimens.	T	Abs. Energy	Shear A	Lat Exp	Flatt. [F]	Durezza	Size
Prova	Preso a	Direz.	Shape / Forma	A Sez.[mm²]	Gage Length / Lungh.[mm]	Sner. [Mpa] Min:	Rottura [Mpa] Min:	Allung. [%] Min:	Contraz. [%] Min:	Dimens. [mm]	Temp. [°C]	Energia ass. [J]	Area d [%]	Esp. Lat. [mm]	Piega Schiacc.	[HBW 2.5/187.5]	Dimens. grano
BAKV	T/2	TRANS	Round	31.000	25.000	261.000	578.800	52.800	72.900				–	–		158-162	
AXAB	T/2	TRANS	Round	31.000	25.000	297.400	567.300	55.000	80.100				–	–		155-159	
AVHH	T/2	LONG	Round	30.800	25.000	309.500	602.400	56.900	72.300				–	–		165-170	
AXBN	T/2	TRANS	Round	31.100	25.000	349.500	562.000	50.800	77.400				–	–		158-166	
AXAA	T/2	TRANS	Round	30.500	25.000	272.200	583.000	58.200	78.200				–	–		157-163	

Test / Prova	C [%]	Si [%]	Mn [%]	S [%]	P [%]	Cr [%]	Ni [%]	Mo [%]	Ti [%]	Cu [%]	V [%]	Al [%]	H [%]	Nb [%]	N [%]	Sn [%]	O [%]	B [%]	Fe [%]	Zr [%]	CE[A] [%]	PREN[B] [%]	CEs[E] [%]	J fact.[D] [%]
BAKV	0.0220	0.4170	1.4550	0.0270	0.0290	16.7000	10.3450	2.0460	0.0060	0.3780					0.0400							24.0918		
AXAB	0.0170	0.5960	1.5960	0.0260	0.0290	16.6150	10.8200	2.1260	0.0970	0.4270					0.0260							24.0468		
AVHH	0.0240	0.3900	1.5000	0.0260	0.0350	18.1100	8.0900								0.0940							19.6140		
AXBN	0.0240	0.2950	1.4860	0.0290	0.0260	18.1700	8.0300	0.3000	0.0040	0.3490					0.0850							20.5200		
AXAA	0.0240	0.2950	1.4860	0.0290	0.0260	18.1700	8.0300	0.3000	0.0040	0.3490					0.0850							20.5200		

REMARKS / Note

1: MATERIAL ACCORDING TO NACE MR0175/ISO 15156-1-2-3 Ed.2020,NACE MR0103 Ed.2015, 2014/68/EU (PED)
2: MATERIAL ACCORDING TO ASME Sect. II Part A 2021 Edition.
3: MATERIAL CAPABLE OF PASSING AN INTERGRANULAR CORROSION A262 Pr.E PMI 100% ON RAW MATERIAL: SATISFACTORY
4: MATERIALS ARE FREE FROM MERCURY CONTAMINATION AND RADIOACTIVITY

A: CE = C + Mn/6 + (Cr+Mo+V)/5 + (Cu+Ni)/15 | B: PREN = Cr + 3.3Mo + 16N
C: X factor = (10P + 5Sb+4Sn+As)/100 - elements expressed in ppm
D: J factor = ((Mn + Si)(P + Sn)) x 10E4 | E: CEs = C + Mn/6

Additional elements: 'BAKV': Co 0.1960 | 'AXAB': Co 0.3520 | 'AVHH': Co 0.1600 | 'AXBN': Co 0.1840 | 'AXAA': Co 0.1840 |

Quality Control Inspector
Certification department
Ispettore controllo qualità

Emmanuel Centemeri

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trademark M.E.G.A. is printed in green color.

Form QC-01-01 Rev.0 2013-03-15

M.E.G.A. S.p.A. - Via Dalla Chiesa, 3 - 24020 Scanzorosciate (Bergamo) - Italy - VAT IT 00210060166 - Ph. +39 035 661280 / 661199 - Fax +39 035 665535 - E-mail inspection@mega-fittings.com

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

raccortubi Heat num. or Pos. marking: BAKV - Qty:3,00

Customer: ROSETTI MARINO S.p.A.

Description: Weldolet BW diam.6"x1" Thk.3.4mmx3.38mm ASTM A182 Gr.F316/316L

Order: 1724000839 - 22.04.24 - Item n.: 140 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400005381 * CERTIFIED TRUE COPY * Issued 12-06-2024

CTCERT20240000003866.1.0002

Customer: ROSETTI MARINO S.p.A.

Description: Weldolet BW diam.6"x1" Thk.3.4mmx3.38mm ASTM A182 Gr.F316/316L

Order: 1724000839 - 22.04.24 - Item n.: 140 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O

raccortubi Heat num. or Pos. marking: BAKV - Qty:3.00

Protocol: CTCERC20240000538I * CERTIFIED TRUE COPY * Issued 12-06-2024

M.E.G.A.

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = ISO 9001:2015 =

INSPECTION CERTIFICATE

Certificato d'ispezione

REPORT N. / Rapporto N.	TC-029860-23-0001	Issued on / Revised on	22/02/2023		Customer / Cliente	Job n. / Com. n. 29860	Page n./ Pagina n.
Revision / Revisione	0	According to / In accordo a	EN 10204:2004 / UNI EN 10204:2005	Type / Tipo 3.1		Purchase order and project/Ordine e progetto: PUR-IOX01132MA	

We hereby certify that all items supplied for the above purchase orders meet all the requirements of the applicable specification of manufacture, the purchase item descriptions, purchase specifications and purchase order requirements. Visual, dimensional and marking check of items supplied has been carried out by our internal inspectors with satisfactory results.
The chemical and mechanical values shown on this EN 10204 certificate are true copy of the mill test certificate issued by the steel mill, or by the laboratory that determined them.
All material is certified to be mercury free and free from radioactivity contamination. No weld repair was performed. Marking was performed by low stress stamps in accordance with MSS SP25 Ed. 2018.

Manufacturing standards:
- 45° and 90° elbows, tees, crosses, full and half couplings, caps, square, hexagonal and round plugs, hexagonal and flush bushings, welding bosses are manufactured in accordance with ASMEB.16.11 Ed. 2021; threads in accordance with ANSI/ASME B1.20.1 Ed. 2013 (R 2018)
- Outlet branches are manufactured in accordance with: ASME B.31.1 Ed. 2022, B.31.3 Ed. 2022 and MSS SP 97 Ed. 2019 and ASME B.31.8 Ed. 2022
- Seamless swage nipples are manufactured in accordance with: BS 3799-74 or MSS SP 95 Ed. 2018
- Seamless pipe nipples are manufactured in accordance with: B36.10 Ed. 2022 or B36.19 Ed. 2022
- Flanged outlet branches are manufactured in accordance with: ASME B.31.1 Ed. 2022, B.31.3 Ed. 2022 and B.16.5 Ed. 2020
- Unions are manufactured in accordance with: BS 3799-74 or MSS SP 83 Ed. 2018

When the length of flanged nipolet is not specified in the description, it is 150 mm.
The material is according to ASTM and ASME Boiler and Pressure Vessel Code Section II.
When the Edition/Revision of the listed standards is not mentioned, it is the latest.
Austenitic, duplex stainless steels and nickel alloy have been pickled and passivated. Machined surfaces do not require pickling and passivation.
M.E.G.A. is approved with certificate DGR-0036-QS-W 75/2002/MUC by T.U.V. (certification Body N.0036) to issue certificate of specific product control in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex 1, Section 4.3.

Test results are relevant only to the specimens belonging to the indicated heat, batch and material.
- Tensile test: ASTM A370 paragraph 6. Elongation determined after fracture, Yield strength determined by 0.2% off-set method
- Impact test: ASTM A370 Paragraph 20 / ASTM E23
- Hardness test: ASTM E10 (HBW); ASTM E92 (HV10); ASTM E18 (HRC)
- Chemical analysis: ASTM E415 and E1086
- Grain size determined according to ASTM E112

The product are manufactured in Italy.

Quality Control Inspector Certification department Ispettore controllo qualità	Emmanuel Centemeri

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trademark M.E.G.A. is printed in green color.

Form QC-01-01 Rev.0 2013-03-15

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

raccortubi
Customer: ROSETTI MARINO S.p.A.
Description: Weldolet BW diam.10"x1" Thk.4.19mmx3.38mm ASTM A182 Gr.F316/316L
Order: 1724000839 - 22.04.24 - Item n.: 150 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Heat num. or Pos. marking: BAKV - Qty:5.00
Protocol: CTCERC202400005381 * CERTIFIED TRUE COPY * Issued 12-06-2024
CTCERT202400003866.1.0001

M.E.G.A.

INSPECTION CERTIFICATE
Certificato d'ispezione

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = ISO 9001:2015 =

REPORT N. / Rapporto N.	TC-029860-23-0001	Issued on / Revised on	22/02/2023	Customer / Cliente		Job n. / Com. n.	29860	Page n./ Pagina n.
Revision / Revisione	0	According to / In accordo a	EN 10204:2004 / UNI EN 10204:2005	Type / Tipo	3.1	Purchase order and project/Ordine e progetto	PUR-IOX01132MA	

DESCRIPTION / DESCRIZIONE

Test / Prova	Item / Pos.	Qty / Q.tà	Customer code / Codice cliente	Material / Materiale	Heat / Colata	Product / Prodotto
BAKV	5	100	WEL6L-140-2	ASTM A182-22a F316/316L	1KAP	MEGALET Sch.40S A/SA182 F316/L 1x3-80
AXAB	6	20	WEL6L-180-1	ASTM A182-22a F316/316L	0AWP	MEGALET Sch.80S A/SA182 F316/L 1x1.1/4-2.1/2
AVHH	7	30	WEL4L-.1280-1	ASTM A182-22a F304/304L	501395	MEGALET Sch.80S A/SA182 F304/L 1/2x3/4-80
AXBN	8	50	WEL4L-140-1	ASTM A182-22a F304/304L	ZSPW	MEGALET Sch.40S A/SA182 F304/L 1x1.1/4-2.1/2
AXAA	9	50	WEL4L-140-2	ASTM A182-22a F304/304L	ZSPW	MEGALET Sch.40S A/SA182 F304/L 1x3-80

Test / Prova	STEEL MELTING AND HEAT TREATMENT DATA / Dettagli di produzione e trattamento termico	CTY of melt	RAW AND FORGING MATERIAL CERTIFICATES / Certificati di acciaieria/forgia	Ref. to MEGA-LAB Mechanical Test
BAKV	ELECT.FURN.-SOLUT.ANNEALED at 1060 C-WATER QUENCHED CERT 8957.MEGA	ES	2021/034777 by ROLDAN / FC-011784-21-0056 by M.E.G.A. S.P.A.	MC-000000-22-728
AXAB	ELECT.FURN.-SOLUT.ANNEALED at 1060 C-WATER QUENCHED CERT 7852.MEGA	ES	2021/000972 by ROLDAN / FC-011173-19-0339 by M.E.G.A. S.P.A.	MC-000000-21-0352
AVHH	ELECT.FURN.-SOLUT.ANNEALED at 1060^C WATER QUENCHED CERT 7134 MEGA	ES	428719 by OLARRA / FC-011173-19-0181 by M.E.G.A. S.P.A.	MC-000000-20-0733
AXBN	ELECT.FURN.-SOLUT.ANNEALED at 1060 C-WATER QUENCHED CERT HTR.7853.MEGA	ES	2020/016209 by ROLDAN / FC-011173-19-0355 by M.E.G.A. S.P.A.	MC-000000-21-0352
AXAA	ELECT.FURN.-SOLUT.ANNEALED at 1060 C-WATER QUENCHED CERT HTR.7790.MEGA	ES	2020/016209 by ROLDAN / FC-011173-19-0368 by M.E.G.A. S.P.A.	MC-000000-21-0361

Test / Prova	Test loc. / Preso a	Orient. / Direz.	TENSILE TEST AT ROOM TEMPERATURE / Trazione a temperatura ambiente						CVN IMPACT TEST (KV) / Prova di resilienza					Bend [B] Flatt. [F] Piega Schiacc.	Hardness Durezza [HBW 2.5/187.5]	Grain Size Dimens. grano
			Specimen / Provino			Yield strength	Tensile strength	Elongation	Red. Of Area	Dimens.	T	Abs. Energy	Shear A	Lat Exp			
			Shape / Forma	A Sez.[mm²]	Gage Length Lungh.[mm]	Sner. [Mpa] Min:	Rottura [Mpa] Min:	Allung. [%] Min:	Contraz. [%] Min:	Dimens. [mm]	Temp. [°C]	Energia ass. [J]	Area d [%]	Esp. Lat. [mm]			
BAKV	T/2	TRANS	Round	31.000	25.000	261.000	578.800	52.800	72.900				–	–		158-162	
AXAB	T/2	TRANS	Round	31.000	25.000	297.400	567.300	55.000	80.100				–	–		155-159	
AVHH	T/2	LONG	Round	30.800	25.000	309.500	602.400	56.900	72.300				–	–		165-170	
AXBN	T/2	TRANS	Round	31.100	25.000	349.500	562.000	50.800	77.400				–	–		158-166	
AXAA	T/2	TRANS	Round	30.500	25.000	272.200	583.000	58.200	78.200				–	–		157-163	

Test / Prova	C [%]	Si [%]	Mn [%]	S [%]	P [%]	Cr [%]	Ni [%]	Mo [%]	Ti [%]	Cu [%]	V [%]	Al [%]	H [%]	Nb [%]	N [%]	Sn [%]	O [%]	B [%]	Fe [%]	Zr [%]	CE[A] [%]	PREN[B] [%]	CES[E] [%]	J fact.[D] [%]
BAKV	0.0220	0.4170	1.4550	0.0270	0.0290	16.7000	10.3450	2.0460	0.0060	0.3780					0.0400							24.0918		
AXAB	0.0170	0.5960	1.5960	0.0260	0.0290	16.6150	10.8200	2.1260	0.0970	0.4270					0.0260							24.0468		
AVHH	0.0240	0.3900	1.5000	0.0260	0.0350	18.1100	8.0900								0.0940							19.6140		
AXBN	0.0240	0.2950	1.4860	0.0290	0.0260	18.1700	8.0300	0.3000	0.0040	0.3490					0.0850							20.5200		
AXAA	0.0240	0.2950	1.4860	0.0290	0.0260	18.1700	8.0300	0.3000	0.0040	0.3490					0.0850							20.5200		

REMARKS / Note

1: MATERIAL ACCORDING TO NACE MR0175/ISO 15156-1-2-3 Ed.2020,NACE MR0103 Ed.2015, 2014/68/EU (PED)
2: MATERIAL ACCORDING TO ASME Sect. II Part A 2021 Edition.
3: MATERIAL CAPABLE OF PASSING AN INTERGRANULAR CORROSION A262 Pr.E PMI 100% ON RAW MATERIAL: SATISFACTORY
4: MATERIALS ARE FREE FROM MERCURY CONTAMINATION AND RADIOACTIVITY

A: CE = C + Mn/6 + (Cr+Mo+V)/5 + (Cu+Ni)/15 | B: PREN = Cr + 3.3Mo + 16N
C: X factor = (10P + 5Sb+4Sn+As)/100 – elements expressed in ppm
D: J factor = ((Mn + Si)(P + Sn)) x 10E4 | E: CEs = C + Mn/6

Additional elements: 'BAKV': Co 0.1960 | 'AXAB': Co 0.3520 | 'AVHH': Co 0.1600 | 'AXBN': Co 0.1840 | 'AXAA': Co 0.1840 |

Quality Control Inspector
Certification department
Ispettore controllo qualità

Emmanuel Centemeri

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trademark M.E.G.A. is printed in green color.

Form QC-01-01 Rev. 0 2013-03-15

M.E.G.A. S.p.A. - Via Dalla Chiesa, 3 - 24020 Scanzorosciate (Bergamo) - Italy - VAT IT 00210060166 - Ph. +39 035 661280 / 661199 - Fax +39 035 665535 - E-mail:inspection@mega-fittings.com

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi Heat num. or Pos. marking: BAKV - Qty:5,00
Customer: ROSETTI MARINO S.p.A.
Description: Weldolet BW diam.10"x1" Thk.4.19mmx3.38mm ASTM A182 Gr.F316/316L
Order: 1724000839 - 22.04.24 - Item n.: 150 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400005381 * CERTIFIED TRUE COPY * Issued 12-06-2024

CTCERT202400003866.1.0002

M.E.G.A.

INSPECTION CERTIFICATE

Certificato d'ispezione

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = ISO 9001:2015 =

REPORT N. / Rapporto N.	TC-029860-23-0001	Issued on / Revised on	22/02/2023	Customer / Cliente	Job n. / Com. n. 29860	Page n./ Pagina n.
Revision / Revisione	0	According to / In accordo a	EN 10204:2004 UNI EN 10204:2005	Type / Tipo	3.1	Purchase order and project/Ordine e progetto: PUR-IOX01132MA

We hereby certify that all items supplied for the above purchase orders meet all the requirements of the applicable specification of manufacture, the purchase item descriptions, purchase specifications and purchase order requirements. Visual, dimensional and marking check of items supplied has been carried out by our internal inspectors with satisfactory results.
The chemical and mechanical values shown on this EN 10204 certificate are true copy of the mill test certificate issued by the steel mill, or by the laboratory that determined them.
All material is certified to be mercury free and free from radioactivity contamination. No weld repair was performed. Marking was performed by low stress stamps in accordance with MSS SP25 Ed. 2018.

Manufacturing standards:
- 45° and 90° elbows, tees, crosses, full and half couplings, caps, square, hexagonal and round plugs, hexagonal and flush bushings, welding bosses are manufactured in accordance with ASMEB.16.11 Ed. 2021; threads in accordance with ANSI/ASME B1.20.1 Ed. 2013 (R 2018)
- Outlet branches are manufactured in accordance with: ASME B.31.1 Ed. 2022, B.31.3 Ed. 2022 and MSS SP 97 Ed. 2019 and ASME B.31.8 Ed. 2022
- Seamless swage nipples are manufactured in accordance with: BS 3799-74 or MSS SP 95 Ed. 2018
- Seamless pipe nipples are manufactured in accordance with: B36.10 Ed. 2022 or B36.19 Ed. 2022
- Flanged outlet branches are manufactured in accordance with: ASME B.31.1 Ed. 2022, B.31.3 Ed. 2022 and B.16.5 Ed. 2020
- Unions are manufactured in accordance with: BS 3799-74 or MSS SP 83 Ed. 2018

When the length of flanged nipolet is not specified in the description, it is 150 mm.
The material is according to ASTM and ASME Boiler and Pressure Vessel Code Section II.
When the Edition/Revision of the listed standards is not mentioned, it is the latest.
Austenitic, duplex stainless steels and nickel alloy have been pickled and passivated. Machined surfaces do not require pickling and passivation.
M.E.G.A. is approved with certificate DGR-0036-QS-W 75/2002/MUC by T.U.V. (certification Body N.0036) to issue certificate of specific product control in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex 1, Section 4.3.

Test results are relevant only to the specimens belonging to the indicated heat, batch and material.
- Tensile test: ASTM A370 paragraph 6. Elongation determined after fracture, Yield strength determined by 0.2% off-set method
- Impact test: ASTM A370 Paragraph 20 / ASTM E23
- Hardness test: ASTM E10 (HBW); ASTM E92 (HV10); ASTM E18 (HRC)
- Chemical analysis: ASTM E415 and E1086
- Grain size determined according to ASTM E112

The product are manufactured in Italy.

Quality Control Inspector Certification department Ispettore controllo qualità	Emmanuel Centemeri

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trademark M.E.G.A. is printed in green color.

Form QC-01-01 Rev. 0 2013-03-15

M.E.G.A. S.p.A. - Via Dalla Chiesa, 3 - 24020 Scanzorosciate (Bergamo) - Italy - VAT IT 00210060166 - Ph. +39 035 661280 / 661199 - Fax +39 035 665539 - E-mail: inspection@mega-fittings.com

ROSETTI MARINO
Supply Management Dept.
Witness Review

Customer: ROSETTI MARINO S.p.A.

Description: NipoFlange Reinforced diam.2"x3/4" Thk.2,77mmx2,87mm 150LB RF ASTM A182 Gr.F316/316L

Order: 17240000839 - 22.04.24 - Item n.: 160 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O

raccortubi Heat num. or Pcs. marking: 278443 - Qty:1,00

Protocol: CTCERC20240000538 1 • CERTIFIED TRUE COPY • Issued 12-06-2024

fittinox PIPE FITTINGS SOLUTIONS

VIA N. COPERNICO,34/36 (Z.I.)
29027 PODENZANO (PC) ITALY
TEL: +39 0523 524138-524208
FAX +39 0523 5241423

INSPECTION CERTIFICATE
according to ISO 10474 / EN 10204
MATERIAL TEST CERTIFICATE

N° 24C0274/01 Rev.0
type: 3.1
DATA 06/06/2024

FITTINOX JOB	CUSTOMER	CUSTOMER P.O.	PROJECT
24C0274	RACCORTUBI S.p.A.	00005870	N/A
MATERIAL SPECIFICATION & GRADE	ASTM A182/A182M:23 F316/316L	DIMENSIONS & TOLERANCES	ASME B16.5-2017 - MSS SP97-2012

FITTINOX ITEM	CUSTOMER ITEM	Q. TY	ITEM DESCRIPTION	HEAT	LOT	CODE	TEST N.
0001	1	1	NIPOFLANGE REINFORCED D.2" x 3/4" WT.2.77mm / 2.87mm 150# RF ASTM A182 F316/316L - ITEM 160	278443			TS00394

BASE MATERIAL TRACEABILITY

HEAT NUMBER	MELTING PROCESS	MILL CERTIFICATE	STEEL MAKER
278443	E.A.F.+ A.O.D.	202304383	COGNE ACCIAI SPECIALI S.P.A.

CHEMICAL ANALYSIS (%)

Min						16,00	10,00	2,00	
Max	0,030	2,00	1,00	0,045	0,030	18,00	14,00	3,00	0,1000
HEAT N°	C	Mn	Si	P	S	Cr	Ni	Mo	N
278443	0,016	1,74	0,29	0,028	0,024	16,75	10,13	2,08	0,0740

HEAT TREATMENT DETAILS

HEAT	LOT	TEST N.	TYPE HT	HEATING RATE °C/h	HOLDING TEMPERATURE °C	HOLDING TIME (hh:mm)	COOLING RATE °C/h	COOLING MEDIA
278443		TS00394	SOLUTION ANNEALING		1050			WATER

MECHANICAL PROPERTIES

		TENSILE TEST											HARDNESS		IMPACT TEST (KV)					
		LIMITS				≥ 205		≥ 515	≥ 30		≥ 50						10 x 10	+20			
HEAT LOT	TEST N.	TEMP	DIR.	POS.	DIM.	YS 0.2%	YS (1%)	TS	A Elong.	L0	Z	YS/ TS	VALUES	AVG VALUE	DIR.	POS.	DIM.	TEMP	IMPACT TEST VALUES	IMPACT TEST AVG	SHEAR AREA VALUES	LATERAL EXP. VALUES
		(°C)			(mm)	(MPa)	(MPa)	(MPa)	(%)		(%)						(mm)	(°C)	(J)	(J)	%	mm.
278443 -	TS00394	23	T	1/2	Ø 8,75	230		553	54,8	4d	76,6	0,42			T	1/2	10 x 10	+20	270-280-276	275,33		

TRADE MARK

ISSUED BY A. ARCELLI — VERIFIED BY G. RAIMONDI — INSPECTOR

DATE 06/06/2024 — DATE

ROSETTI MARINO S.p.A. Supply Management Dept.
☐ Witness ☒ Review

INSPECTOR — DATE

raccortubi

Customer: ROSETTI MARINO S.p.A.

Description: NipoFlange Reinforced diam.2"x3/4" Thk.2,77mmx2,87mm 150LB RF ASTM A182 Gr.F316/316L

Heat num. or Pos. marking: 278443 - Qty:1,00

Order: 1724000839 - 22.04.24 - Item n.: 160 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010

Protocol: CTCERC2024000005381 * CERTIFIED TRUE COPY
* Issued 12-06-2024

fittinox
PIPE FITTINGS SOLUTIONS

VIA N. COPERNICO,34/36 (Z.I.)
29027 PODENZANO (PC) ITALY
TEL: +39 0523 524138-524208
FAX +39 0523 5241423

INSPECTION CERTIFICATE
according to ISO 10474 / EN 10204
MATERIAL TEST CERTIFICATE

N° 24C0274/01 Rev.0
type: 3.1
DATA 06/06/2024

REMARKS AND SUPPLEMENTARY INFORMATION

-Mechanical properties on pieces in finished conditions.
-Starting material: Round forged bar
-Type of construction: seamless.
-Method of manufacture: Machined directly from solution-annealed round forged bar
-100% Positive material identification (PMI) carried out on finished pieces with satisfactory results.
-100% Visual dimensional and marking check carried out on finished pieces with satisfactory results.
-Marking: MSS-SP25-13
-Surface protection: Degreasing
MATERIAL MANUFACTURER APPROVED WITH CERTIFICATE NR. 07/202/9080/WZ/1524/17 BY TUV NORD (NOTIFIED BODY 0045) TO ISSUE CERTIFICATES OF SPECIFIC PRODUCT CONTROL IN ACCORDANCE WITH PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU ANNEX 1 POINT 4.3. MATERIAL CHARACTERISTICS COMPLY WITH POINT 7.5 OF ANNEX I TO PED BY HAVING AN ELONGATION AFTER RUPTURE AT TENSILE TEST NO LESS THAN 14% AND A BENDING RUPTURE ENERGY AT IMPACT TEST NO LESS THAN 27 J AT 20°C.

WE CERTIFY THAT THE DELIVERED PRODUCTS COMPLY WITH THE ORDER

TRADE MARK FX

ISSUED BY A. ARCELLI

VERIFIED BY G. RAIMONDI

DATE 06/06/2024

DATE

INSPECTOR
ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

DATE

INSPECTOR

CTCERT202400004064.1.0001

VIRAJ

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

Manufacturer's Symbol (A04)	(A03)MTR NO.	12/230014285/46 / Rev - 00
	INVOICE NUMBER	910020059
	(Z02) DATE	29.04.2023
	MATERIAL SPEC.	ASTM A182/A182M-22/ASME SA182/SA182M-21
		EN10222-5-2017/ASME SECT.II PART A-2021
	(B02) GRADE	F316/316L/1.4401/1.4404
	DIMENSIONAL SPEC.	ASME B16.5-2020

(B01) : STAINLESS STEEL FORGED FLANGES

(B04) DELIVERY CONDITION :

ISO 9001:2015-TUV NORD REG.No-04100031210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PED (2014/68/EU) BY CERTIFICATION BODY FOR PRESSURE EQUIPMENT OF TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION NO. -0045)

(A07)ORDER NO: 82	(A08)Sales Order No. 100019034/000330	(A09)Article No:FLGWN15011/4"316L*

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
1-1/4" WNRF 150# S40S	31	DB166

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Ti	%N
MIN						16.50	10.00	2.00		
MAX	0.030	2.00	1.00	0.030	0.045	18.50	12.00	2.50		0.1000
HEAT	0.019	1.58	0.32	0.024	0.043	16.80	10.05	2.01	0.002	0.0660

MECHANICAL PROPERTIES

(C01) Sample location : Mid thickness-forging	(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Sample Shape Round		ASTM E10	

Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13)	Reduction of Area	(C32) Hardness	(C40) Charpy V-Notch 10x10x55mm Values At +20°C (Joules)			
		Rp=0.2%	Rp = 1%	Elongation%			(C42) Single values			(C43)
	MPA	MPA	MPA	Lo=4D	%	BHN	1	2	3	AVG
Req.	515/690	205 MIN	225 MIN	35 MIN	50 MIN	237 MAX				
T	546.72	253.32	302.19	61.40	72.96	150	196	182	176	185

Other applicable Specifications :; NACE MR 0175-2021 / ISO 15156-2020 NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10

Melting Process : Electrical induction furnace & Argon Oxygen decarburization(IRS) Concast

Heat Treatment	: Solution Annealed at 1080°C and water Quenched
Dimensional Inspection	: Conform with the specification (100% inspected)
Surface Quality	: Satisfactory Roughness value - RZ 12.5 TO 25 lm / RA 3.2 TO 6.3 lm
PMI Test	: No objection (100% tested with mobile spectro)
Corrosion Test	: Passed IGC test in accordance with DIN EN ISO 3651-2 & ASTM A262 Practice E
Micro Observation	: No carbide precipitation observed on grain boundaries
Radioactivity Test	: We here by certify that all the material is free from radioactive contamination
Mercury Contamination	: Free from mercury contamination

We certify that the above material has been inspected and tested and complies with the order/contract and is of Indian origin

VF 1

(Z03)Inspector's Stamp

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

VIJAY KUMAR PILLAI (GM, QAD)

VIRAJ PROFILES LTD. QUALITY ASSURANCE

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1070 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1.1/4" S.150 RF SCH.10/S

raccortubi Heat num. or Pcs. marking: DB166 - Qty:2,00

Protocol: CTCERC202400005381 * CERTIFIED TRUE COPY
* Issued 12-06-2024

CTCERT202400004064.1.0001

VIRAJ

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

	Manufacturer's Symbol (A04)	(A03)MTR NO.	12/230014285/46 / Rev - 00
		INVOICE NUMBER	910020059
		(Z02) DATE	29.04.2023
		MATERIAL SPEC.	ASTM A182/A182M-22/ASME SA182/SA182M-21
			EN10222-5-2017/ASME SECT.II PART A-2021
		(B02) GRADE	F316/316L/1.4401/1.4404
		DIMENSIONAL SPEC.	ASME B16.5-2020

(B01) : STAINLESS STEEL FORGED FLANGES | (B04) DELIVERY CONDITION :

ISO 9001:2015-TUV NORD REG.No-04100031210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PED (2014/68/EU) BY CERTIFICATION BODY FOR PRESSURE EQUIPMENT OF TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION NO. -0045)

(A07)ORDER NO: 82	(A08)Sales Order No. 10001903 4/000330	(A09)Article No:FLGWN15011/4"316L*

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
1-1/4" WNRF 150# S40S	31	DB166

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Ti	%N
MIN						16.50	10.00	2.00		
MAX	0.030	2.00	1.00	0.030	0.045	18.50	12.00	2.50		0.1000
HEAT	0.019	1.58	0.32	0.024	0.043	16.80	10.05	2.01	0.002	0.0660

MECHANICAL PROPERTIES

(C01) Sample location : Mid thickness-forging	(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Sample Shape Round		ASTM E10	

Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13)	Reduction of Area	(C32) Hardness	(C40) Charpy V-Notch 10x10x55mm Values At +20°C (Joules)			
		Rp=0.2%	Rp = 1%	Elongation%			(C42) Single values			(C43)
	MPA	MPA	MPA	Lo=4D	%	BHN	1	2	3	AVG
Req.	515/690	205 MIN	225 MIN	35 MIN	50 MIN	237 MAX				
T	546.72	253.32	302.19	61.40	72.96	150	196	182	176	185

Other applicable Specifications :: NACE MR 0175-2021 / ISO 15156-2020 NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10

Melting Process : Electrical induction furnace & Argon Oxygen decarburization(IRS) Concast

Heat Treatment	: Solution Annealed at 1080°C and water Quenched
Dimensional Inspection	: Conform with the specification (100% inspected)
Surface Quality	: Satisfactory Roughness value - RZ 12.5 TO 25 lm / RA 3.2 TO 6.3 lm
PMI Test	: No objection (100% tested with mobile spectro)
Corrosion Test	: Passed IGC test in accordance with DIN EN ISO 3651-2 & ASTM A262 Practice E
Micro Observation	: No carbide precipitation observed on grain boundaries
Radioactivity Test	: We here by certify that all the material is free from radioactive contamination
Mercury Contamination	: Free from mercury contamination

We certify that the above material has been inspected and tested and complies with the order/contract and is of Indian origin

VF 1

(Z03)Inspector's Stamp

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

VIJAY KUMAR PILLAI (GM, QAD)

VIRAJ PROFILES LTD. QUALITY ASSURANCE

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724000839	123A90A	Q012400616

ROSETTI MARINO

ROSETTI MARINO
Conforme alla spec. PO
According to the spc.----------.
TMUGF Firma — Data
MTSMD Signature — Date
Sonia Emiliani 31/07/2024
Sonia Emiliani
☒ REVIEW
☐ WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 30/07/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	SEE BELOW
Prot. N.	00007270
Packing list	PLPLIS202400006940
Ns. Rif.	00002010
Vs. Rif.	1724000839 - 22.04.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00007270

23/09/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 23/09/2024
Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				FLANGE SEC. ASTM A-182 F53 UNS S32750 DIMS SEC. ANSI B16.5	
870	NR	22	0,00	W.N. 1" S.150 RF SCH.40/S	407642
880	NR	6	0,00	W.N. 2" S.150 RF SCH.10/S	555304
890	NR	6	0,00	W.N. 3/4" S.150 RF SCH.40/S	407642
900	NR	29	0,00	W.N. 1.1/2" S.150 RF SCH.40/S	E170081
1080	NR	4	0,00	Flange WN For Jackscrews diam.1" Thk.3,38mm 150LB RF ASTM A182 Gr.F316/316L	346569
				FLANGE SEC. ASTM A-182 F53 UNS S32750 DIMS SEC. ANSI B16.5	
1090	NR	3	0,00	W.N. 3/4" S.150 FF SCH.40/S	407642
1100	NR	6	0,00	W.N. 1" S.150 FF SCH.40/S	407642

raccortubi

00007270

23/09/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

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Date: 23/09/2024
Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
1110	NR	3	0,00	W.N. 1.1/2" S.150 FF SCH.40/S	E170081
1150	NR	4	0,00	Flange WN For Jackscrews diam.1" Thk.3,38mm 150LB RF ASTM A182 Gr.F53	407642

raccortubi

00007270

23/09/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
			FLANGE SEC. ASTM A-182 F53 UNS S32750 DIMS SEC. ANSI B16.5	
870	22	NR	W.N. 1" S.150 RF SCH.40/S	407642
880	6	NR	W.N. 2" S.150 RF SCH.10/S	555304
890	6	NR	W.N. 3/4" S.150 RF SCH.40/S	407642
900	29	NR	W.N. 1.1/2" S.150 RF SCH.40/S	E170081
1080	4	NR	Flange WN For Jackscrews diam.1" Thk.3,38mm 150LB RF ASTM A182 Gr.F316/316L	346569
			FLANGE SEC. ASTM A-182 F53 UNS S32750 DIMS SEC. ANSI B16.5	
1090	3	NR	W.N. 3/4" S.150 FF SCH.40/S	407642
1100	6	NR	W.N. 1" S.150 FF SCH.40/S	407642
1110	3	NR	W.N. 1.1/2" S.150 FF SCH.40/S	E170081

raccortubi

00007270

23/09/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

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Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
1150	4	NR	Flange WN For Jackscrews diam.1" Thk.3,38mm 150LB RF ASTM A182 Gr.F53	407642

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Marchio Produttore/Manufacture's Mark

ISO 9001:2015 QMS
approved by LLOYD'S REGISTER
Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Codice Colata Heat Code	Colata Fornitore Supplier Heat code	Lotto di Prod. Prod.Ref.Nr.	Cod T.T. H.T. Code	Materiale Material	Q.tà Q.ty
555304	555304	PR24003756	G	A/SA 182 F53	6
IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN					
407642	407642	PR24004421	G	A/SA 182 F53	22
IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004531	G	A/SA 182 F53	6
IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004434	G	A/SA 182 F53	3
IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN					
407642	407642	PR24004422	G	A/SA 182 F53	6
IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN					
346569	346569	PR24004415	C	A/SA 182 F316/F316L	4
IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN					
407642	407642	PR24004423	G	A/SA 182 F53	4
IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN					
E170081	E170081	PR24003023001	G	A/SA 182 F53	29
IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN					
E170081	E170081	PR24003022001	G	A/SA 182 F53	3
IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN					

Analisi Chimiche / Chemical Analysis

Codice Colata Heat Code															
346569	C%	0,0290	Mn%	1,5900	Si%	0,4400	P%	0,0320	S%	0,0250	Cr%	16,6500	Ni%	10,0000	Mo%	2,0300
	Ti%		N%	0,0290	Cu%		Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ											
407642	C%	0,0240	Mn%	0,7500	Si%	0,2600	P%	0,0200	S%	0,0008	Cr%	25,2000	Ni%	6,8500	Mo%	3,8400
	Ti%		N%	0,2625	Cu%	0,1300	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,07

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti S.r.l. NOEMI COSTANZONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 870 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1" S.150 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:22,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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Marchio Produttore/Manufacture's Mark

ISO 9001:2015 QMS
approved by LLOYD'S REGISTER
Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

555304	C%	0,0090	Mn%	0,7800	Si%	0,2600	P%	0,0220	S%	0,0008	Cr%	25,2000	Ni%	6,9100	Mo%	3,7900
	Ti%		N%	0,2900	Cu%	0,1200	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,35
E170081	C%	0,0120	Mn%	0,6800	Si%	0,3400	P%	0,0240	S%	0,0010	Cr%	25,1800	Ni%	6,6000	Mo%	3,7800
	Ti%	0,0050	N%	0,2860	Cu%	0,1000	Nb%	0,0170	V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,23

Prove meccaniche / Mechanical tests

Lotto Prod. Prod.Lot Nr.	Codice Colata Heat Code	Snervamento Rp0.2% (MPa)	Rottura Rm (MPa)	Allungamento A% Elong in 2"	Contrazione Z% Reduct	Resilienza - TIPO	Resilienza - TEMP °C	Impact Test (J) TEST1	TEST2	TEST3	Media Average	Durezza Hardness HB		
PR24003756	555304	578	813	40,3	74	KV	-46	299,10	230,60	200,10	243,30	270	276	273
PR24004421	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004531	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004434	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004422	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004415	346569	400	645	48,5	72							163	160	169
PR24004423	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24003023001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270
PR24003022001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
GALPERTI S.r.l. NOEMI COSTANZONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 870 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1" S.150 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:22,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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Marchio Produttore/Manufacture's Mark

ISO 9001:2015 QMS
approved by LLOYD'S REGISTER
Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Materiale Material	Cod T.T. H.T. Code		Tipo di Trattamento Material treatment	Condizioni di Trattamento Condition Treatment
A/SA 182 F316/F316L	C		Solution Annealed + Wat. Quench	Min 1040° C
A/SA 182 F53	G		Solution Annealed + Wat. Quench	1080°C+-10°C WAT:QUENC.

Note Generali

Additional requirements:
- Satisfactory visual and dimensional check
- Steel making process:Electric Furnace, AOD
- Hardness on the pieces <301HB for material F53
- Holding time for Solution Annealing: 1 h/inch

IMPACT TEST AT 46°C T/2 trasv
Heat / values (J)
555304 / 186,9 - 205,8 - 190,3
407642 / 225,8 - 200,3 - 175,6
E170081 / 122,9 - 108,3 - 155,8

FERRIC CHLORIDE PITTING TEST
ASTM G48 (50°x24h) (full thk weld end)
555304
- corrosion rate: 0,1 g/m2
- No pits have been found at 20x magn
407642
- corrosion rate: 0,03 g/m2
- No pits have been found at 20x magn
E170081
- corrosion rate: 0,2 g/m2
- No pits have been found at 20x magn

DETERMINATION OF FERRITIC VOLUME FRACTION
ASTM E562 + A923 (full thk weld end)
555304
- estimated fraction of ferrite = 49,1%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
407642
- estimated fraction of ferrite = 50%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
E170081

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti s.r.l. NOEMI COSTADONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 870 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1" S.150 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:22,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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Certificato di Collaudo **Inspection certificate**	Certificato n°. **Certificate n°.**	Data **Date**	Commessa **Internal Ref.**	Lista Imballo. N° **Packing List N°**
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente **Customer reference**	Cliente **Client**	Ordine **Order**
00636	RACCORTUBI S.P.A.	00005825 REV.1

- estimated fraction of ferrite = 46,6%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected

Heat / Steel plant
555304 / Sandvik
407642 / Bgh Edelstahl
E170081 / Outokumpu

Norms applicable:
- ASTM A182 LAST EDITION
- ASME SA182 LAST EDITION
- PED 2014/68/UE
- Spec. NORSOK M630 ed.7 (2020)
  NORSOK MDS D54 Rev.7
  QTR 02/2017

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti S.r.l. NOEMI COSTALONI-QC		

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galpertisrl.com

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 870 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1" S.150 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:22,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

cs. marking: 407642 - Qty:22,00

Order: 1724000839 - 22.04.24 - Item n.: 870 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010

Protocol: CTCERC20240007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

Item Detail							Ex
Heat Code	Heat Treatment	Material	Q.ty	Q.ty Examined	Item No.	Description	Result
555304	Solution annealed	A/SA 182 F53	6	6		IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	4	4		IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	3	3		IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	22	22		IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	3	3		IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN	CONFORM
346569	Solution annealed	A/SA 182 F316/F316L	4	4		IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	29	29		IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN	CONFORM

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Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Codice Colata Heat Code	Colata Fornitore Supplier Heat code	Lotto di Prod. Prod.Ref.Nr.	Cod T.T. H.T. Code	Materiale Material	Q.tà Q.ty
555304	555304	PR24003756	G	A/SA 182 F53	6
IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN					
407642	407642	PR24004421	G	A/SA 182 F53	22
IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004531	G	A/SA 182 F53	6
IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004434	G	A/SA 182 F53	3
IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN					
407642	407642	PR24004422	G	A/SA 182 F53	6
IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN					
346569	346569	PR24004415	C	A/SA 182 F316/F316L	4
IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN					
407642	407642	PR24004423	G	A/SA 182 F53	4
IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN					
E170081	E170081	PR24003023001	G	A/SA 182 F53	29
IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN					
E170081	E170081	PR24003022001	G	A/SA 182 F53	3
IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN					

Analisi Chimiche / Chemical Analysis

Codice Colata Heat Code															
346569	C%	0,0290	Mn%	1,5900	Si%	0,4400	P%	0,0320	S%	0,0250	Cr%	16,6500	Ni%	10,0000	Mo%	2,0300
	Ti%		N%	0,0290	Cu%		Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ											
407642	C%	0,0240	Mn%	0,7500	Si%	0,2600	P%	0,0200	S%	0,0008	Cr%	25,2000	Ni%	6,8500	Mo%	3,8400
	Ti%		N%	0,2625	Cu%	0,1300	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,07

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti S.r.l. NOEMI COSTANZONI-QC		

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Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 880 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 2" S.150 RF SCH.10/S

raccortubi Heat num. or Pcs. marking: 555304 - Qty:6,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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Marchio Produttore/Manufacture's Mark

ISO 9001:2015 QMS
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Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

555304	C%	0,0090	Mn%	0,7800	Si%	0,2600	P%	0,0220	S%	0,0008	Cr%	25,2000	Ni%	6,9100	Mo%	3,7900
	Ti%		N%	0,2900	Cu%	0,1200	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,35
E170081	C%	0,0120	Mn%	0,6800	Si%	0,3400	P%	0,0240	S%	0,0010	Cr%	25,1800	Ni%	6,6000	Mo%	3,7800
	Ti%	0,0050	N%	0,2860	Cu%	0,1000	Nb%	0,0170	V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,23

Prove meccaniche / Mechanical tests

Lotto Prod. Prod.Lot Nr.	Codice Colata Heat Code	Snervamento Rp0.2% (MPa)	Rottura Rm (MPa)	Allungamento A% Elong in 2"	Contrazione Z% Reduct	Resilienza - TIPO	Resilienza - TEMP °C	Impact Test (J) TEST1	TEST2	TEST3	Media Average	Durezza Hardness HB		
PR24003756	555304	578	813	40,3	74	KV	-46	299,10	230,60	200,10	243,30	270	276	273
PR24004421	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004531	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004434	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004422	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004415	346569	400	645	48,5	72							163	160	169
PR24004423	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24003023001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270
PR24003022001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
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galpertisrl.com

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 880 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 2" S.150 RF SCH.10/S

raccortubi Heat num. or Pcs. marking: 555304 - Qty:6,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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Cert. No 10469041 and No 10469042

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Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Materiale Material	Cod T.T. H.T. Code		Tipo di Trattamento Material treatment	Condizioni di Trattamento Condition Treatment
A/SA 182 F316/F316L	C		Solution Annealed + Wat. Quench	Min 1040° C
A/SA 182 F53	G		Solution Annealed + Wat. Quench	1080°C+-10°C WAT:QUENC.

Note Generali

Additional requirements:
- Satisfactory visual and dimensional check
- Steel making process:Electric Furnace, AOD
- Hardness on the pieces <301HB for material F53
- Holding time for Solution Annealing: 1 h/inch

IMPACT TEST AT 46°C T/2 trasv
Heat / values (J)
555304 / 186,9 - 205,8 - 190,3
407642 / 225,8 - 200,3 - 175,6
E170081 / 122,9 - 108,3 - 155,8

FERRIC CHLORIDE PITTING TEST
ASTM G48 (50°x24h) (full thk weld end)
555304
- corrosion rate: 0,1 g/m2
- No pits have been found at 20x magn
407642
- corrosion rate: 0,03 g/m2
- No pits have been found at 20x magn
E170081
- corrosion rate: 0,2 g/m2
- No pits have been found at 20x magn

DETERMINATION OF FERRITIC VOLUME FRACTION
ASTM E562 + A923 (full thk weld end)
555304
- estimated fraction of ferrite = 49,1%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
407642
- estimated fraction of ferrite = 50%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
E170081

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
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galpertisrl.com

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 880 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: W.N. 2" S.150 RF SCH.10/S

raccortubi Heat num. or Pcs. marking: 555304 - Qty:6,00
Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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Certificato di Collaudo **Inspection certificate**	*Certificato n°.* **Certificate n°.**	*Data* **Date**	*Commessa* **Internal Ref.**	*Lista Imballo. N°* **Packing List N°**
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente **Customer reference**	*Cliente* **Client**	*Ordine* **Order**
00636	RACCORTUBI S.P.A.	00005825 REV.1

- estimated fraction of ferrite = 46,6%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected

Heat / Steel plant
555304 / Sandvik
407642 / Bgh Edelstahl
E170081 / Outokumpu

Norms applicable:
- ASTM A182 LAST EDITION
- ASME SA182 LAST EDITION
- PED 2014/68/UE
- Spec. NORSOK M630 ed.7 (2020)
  NORSOK MDS D54 Rev.7
  QTR 02/2017

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Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 880 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 2" S.150 RF SCH.10/S

raccortubi Heat num. or Pcs. marking: 555304 - Qty:6,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

Item Detail							Ex
Heat Code	Heat Treatment	Material	Q.ty	Q.ty Examined	Item No.	Description	Result
555304	Solution annealed	A/SA 182 F53	6	6		IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	4	4		IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	3	3		IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	22	22		IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	3	3		IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN	CONFORM
346569	Solution annealed	A/SA 182 F316/F316L	4	4		IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	29	29		IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN	CONFORM

cs. marking: 555304 - Qty:6,00

Order: 1724000839 - 22.04.24 - Item n.: 880 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010

Protocol: CTCERC20240007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Codice Colata Heat Code	Colata Fornitore Supplier Heat code	Lotto di Prod. Prod.Ref.Nr.	Cod T.T. H.T. Code	Materiale Material	Q.tà Q.ty
555304	555304	PR24003756	G	A/SA 182 F53	6
IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN					
407642	407642	PR24004421	G	A/SA 182 F53	22
IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004531	G	A/SA 182 F53	6
IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004434	G	A/SA 182 F53	3
IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN					
407642	407642	PR24004422	G	A/SA 182 F53	6
IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN					
346569	346569	PR24004415	C	A/SA 182 F316/F316L	4
IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN					
407642	407642	PR24004423	G	A/SA 182 F53	4
IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN					
E170081	E170081	PR24003023001	G	A/SA 182 F53	29
IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN					
E170081	E170081	PR24003022001	G	A/SA 182 F53	3
IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN					

Analisi Chimiche / Chemical Analysis

Codice Colata Heat Code															
346569	C%	0,0290	Mn%	1,5900	Si%	0,4400	P%	0,0320	S%	0,0250	Cr%	16,6500	Ni%	10,0000	Mo%	2,0300
	Ti%		N%	0,0290	Cu%		Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ											
407642	C%	0,0240	Mn%	0,7500	Si%	0,2600	P%	0,0200	S%	0,0008	Cr%	25,2000	Ni%	6,8500	Mo%	3,8400
	Ti%		N%	0,2625	Cu%	0,1300	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,07

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti S.r.l. NOEMI COSTADONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 890 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 3/4" S.150 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:6,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

555304	C%	0,0090	Mn%	0,7800	Si%	0,2600	P%	0,0220	S%	0,0008	Cr%	25,2000	Ni%	6,9100	Mo%	3,7900
	Ti%		N%	0,2900	Cu%	0,1200	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,35
E170081	C%	0,0120	Mn%	0,6800	Si%	0,3400	P%	0,0240	S%	0,0010	Cr%	25,1800	Ni%	6,6000	Mo%	3,7800
	Ti%	0,0050	N%	0,2860	Cu%	0,1000	Nb%	0,0170	V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,23

Prove meccaniche / Mechanical tests

Lotto Prod. Prod.Lot Nr.	Codice Colata Heat Code	Snervamento Rp0.2% (MPa)	Rottura Rm (MPa)	Allungamento A% Elong in 2"	Contrazione Z% Reduct	Resilienza - TIPO	Resilienza - TEMP °C	Impact Test (J) TEST1	TEST2	TEST3	Media Average	Durezza Hardness HB		
PR24003756	555304	578	813	40,3	74	KV	-46	299,10	230,60	200,10	243,30	270	276	273
PR24004421	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004531	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004434	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004422	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004415	346569	400	645	48,5	72							163	160	169
PR24004423	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24003023001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270
PR24003022001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti S.r.l. NOEMI COSTANZONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 890 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 3/4" S.150 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:6,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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Marchio Produttore/Manufacture's Mark

ISO 9001:2015 QMS
approved by LLOYD'S REGISTER
Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Materiale Material	Cod T.T. H.T. Code		Tipo di Trattamento Material treatment	Condizioni di Trattamento Condition Treatment
A/SA 182 F316/F316L	C		Solution Annealed + Wat. Quench	Min 1040° C
A/SA 182 F53	G		Solution Annealed + Wat. Quench	1080°C+-10°C WAT:QUENC.

Note Generali

Additional requirements:
- Satisfactory visual and dimensional check
- Steel making process:Electric Furnace, AOD
- Hardness on the pieces <301HB for material F53
- Holding time for Solution Annealing: 1 h/inch

IMPACT TEST AT 46°C T/2 trasv
Heat / values (J)
555304 / 186,9 - 205,8 - 190,3
407642 / 225,8 - 200,3 - 175,6
E170081 / 122,9 - 108,3 - 155,8

FERRIC CHLORIDE PITTING TEST
ASTM G48 (50°x24h) (full thk weld end)
555304
- corrosion rate: 0,1 g/m2
- No pits have been found at 20x magn

407642
- corrosion rate: 0,03 g/m2
- No pits have been found at 20x magn

E170081
- corrosion rate: 0,2 g/m2
- No pits have been found at 20x magn

DETERMINATION OF FERRITIC VOLUME FRACTION
ASTM E562 + A923 (full thk weld end)
555304
- estimated fraction of ferrite = 49,1%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected

407642
- estimated fraction of ferrite = 50%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected

E170081

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti s.r.l. NOEMI COSTABONI-QC		

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Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 890 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 3/4" S.150 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:6,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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Certificato di Collaudo **Inspection certificate**	*Certificato n°.* **Certificate n°.**	*Data* **Date**	*Commessa* **Internal Ref.**	*Lista Imballo. N°* **Packing List N°**
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente **Customer reference**	*Cliente* **Client**	*Ordine* **Order**
00636	RACCORTUBI S.P.A.	00005825 REV.1

- estimated fraction of ferrite = 46,6%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected

Heat / Steel plant
555304 / Sandvik
407642 / Bgh Edelstahl
E170081 / Outokumpu

Norms applicable:
- ASTM A182 LAST EDITION
- ASME SA182 LAST EDITION
- PED 2014/68/UE
- Spec. NORSOK M630 ed.7 (2020)
  NORSOK MDS D54 Rev.7
  QTR 02/2017

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galpertisrl.com

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 890 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: W.N. 3/4" S.150 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:6,00
Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

cs. marking: 407642 - Qty:6,00

Order: 1724000839 - 22.04.24 - Item n.: 890 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010

Protocol: CTCERC20240007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

Item Detail							Ex
Heat Code	Heat Treatment	Material	Q.ty	Q.ty Examined	Item No.	Description	Result
555304	Solution annealed	A/SA 182 F53	6	6		IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	4	4		IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	3	3		IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	22	22		IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	3	3		IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN	CONFORM
346569	Solution annealed	A/SA 182 F316/F316L	4	4		IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	29	29		IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN	CONFORM

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Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Codice Colata Heat Code	Colata Fornitore Supplier Heat code	Lotto di Prod. Prod.Ref.Nr.	Cod T.T. H.T. Code	Materiale Material	Q.tà Q.ty
555304	555304	PR24003756	G	A/SA 182 F53	6
IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN					
407642	407642	PR24004421	G	A/SA 182 F53	22
IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004531	G	A/SA 182 F53	6
IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004434	G	A/SA 182 F53	3
IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN					
407642	407642	PR24004422	G	A/SA 182 F53	6
IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN					
346569	346569	PR24004415	C	A/SA 182 F316/F316L	4
IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN					
407642	407642	PR24004423	G	A/SA 182 F53	4
IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN					
E170081	E170081	PR24003023001	G	A/SA 182 F53	29
IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN					
E170081	E170081	PR24003022001	G	A/SA 182 F53	3
IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN					

Analisi Chimiche / Chemical Analysis

Codice Colata Heat Code															
346569	C%	0,0290	Mn%	1,5900	Si%	0,4400	P%	0,0320	S%	0,0250	Cr%	16,6500	Ni%	10,0000	Mo%	2,0300
	Ti%		N%	0,0290	Cu%		Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ											
407642	C%	0,0240	Mn%	0,7500	Si%	0,2600	P%	0,0200	S%	0,0008	Cr%	25,2000	Ni%	6,8500	Mo%	3,8400
	Ti%		N%	0,2625	Cu%	0,1300	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,07

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galpertisrl.com

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 900 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1.1/2" S.150 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: E170081 - Qty:29,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

555304	C%	0,0090	Mn%	0,7800	Si%	0,2600	P%	0,0220	S%	0,0008	Cr%	25,2000	Ni%	6,9100	Mo%	3,7900
	Ti%		N%	0,2900	Cu%	0,1200	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,35
E170081	C%	0,0120	Mn%	0,6800	Si%	0,3400	P%	0,0240	S%	0,0010	Cr%	25,1800	Ni%	6,6000	Mo%	3,7800
	Ti%	0,0050	N%	0,2860	Cu%	0,1000	Nb%	0,0170	V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,23

Prove meccaniche / Mechanical tests

Lotto Prod. Prod.Lot Nr.	Codice Colata Heat Code	Snervamento Rp0.2% (MPa)	Rottura Rm (MPa)	Allungamento A% Elong in 2"	Contrazione Z% Reduct	Resilienza - TIPO	Resilienza - TEMP °C	Impact Test (J) TEST1	TEST2	TEST3	Media Average	Durezza Hardness HB		
PR24003756	555304	578	813	40,3	74	KV	-46	299,10	230,60	200,10	243,30	270	276	273
PR24004421	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004531	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004434	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004422	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004415	346569	400	645	48,5	72							163	160	169
PR24004423	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24003023001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270
PR24003022001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270

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galpertisrl.com

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 900 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1.1/2" S.150 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: E170081 - Qty:29,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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Certificato di Collaudo **Inspection certificate**	Certificato n°. **Certificate n°.**	Data **Date**	Commessa **Internal Ref.**	Lista Imballo. N° **Packing List N°**
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente **Customer reference**	Cliente **Client**	Ordine **Order**
00636	RACCORTUBI S.P.A.	00005825 REV.1

Materiale **Material**	Cod T.T. H.T. Code		Tipo di Trattamento **Material treatment**	Condizioni di Trattamento **Condition Treatment**
A/SA 182 F316/F316L	C		Solution Annealed + Wat. Quench	Min 1040° C
A/SA 182 F53	G		Solution Annealed + Wat. Quench	1080°C+-10°C WAT:QUENC.

Note Generali

Additional requirements:
- Satisfactory visual and dimensional check
- Steel making process:Electric Furnace, AOD
- Hardness on the pieces <301HB for material F53
- Holding time for Solution Annealing: 1 h/inch

IMPACT TEST AT 46°C T/2 trasv
Heat / values (J)
555304 / 186,9 - 205,8 - 190,3
407642 / 225,8 - 200,3 - 175,6
E170081 / 122,9 - 108,3 - 155,8

FERRIC CHLORIDE PITTING TEST
ASTM G48 (50°x24h) (full thk weld end)
555304
- corrosion rate: 0,1 g/m2
- No pits have been found at 20x magn
407642
- corrosion rate: 0,03 g/m2
- No pits have been found at 20x magn
E170081
- corrosion rate: 0,2 g/m2
- No pits have been found at 20x magn

DETERMINATION OF FERRITIC VOLUME FRACTION
ASTM E562 + A923 (full thk weld end)
555304
- estimated fraction of ferrite = 49,1%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
407642
- estimated fraction of ferrite = 50%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
E170081

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Galperti s.r.l. NORMI COSTADONI-QC		

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Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 900 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: W.N. 1.1/2" S.150 RF SCH.40/S

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Certificato di Collaudo **Inspection certificate**	*Certificato n°.* **Certificate n°.**	*Data* **Date**	*Commessa* **Internal Ref.**	*Lista Imballo. N°* **Packing List N°**
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente **Customer reference**	*Cliente* **Client**	*Ordine* **Order**
00636	RACCORTUBI S.P.A.	00005825 REV.1

- estimated fraction of ferrite = 46,6%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected

Heat / Steel plant
555304 / Sandvik
407642 / Bgh Edelstahl
E170081 / Outokumpu

Norms applicable:
- ASTM A182 LAST EDITION
- ASME SA182 LAST EDITION
- PED 2014/68/UE
- Spec. NORSOK M630 ed.7 (2020)
  NORSOK MDS D54 Rev.7
  QTR 02/2017

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galpertisrl.com

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 900 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1.1/2" S.150 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: E170081 - Qty:29,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

cs. marking: E170081 - Qty:29,00

Order: 1724000839 - 22.04.24 - Item n.: 900 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010

Protocol: CTCERC20240000727O * CERTIFIED TRUE COPY
* Issued 30-07-2024

Item Detail							Ex
Heat Code	Heat Treatment	Material	Q.ty	Q.ty Examined	Item No.	Description	Result
555304	Solution annealed	A/SA 182 F53	6	6		IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	4	4		IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	3	3		IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	22	22		IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	3	3		IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN	CONFORM
346569	Solution annealed	A/SA 182 F316/F316L	4	4		IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	29	29		IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN	CONFORM

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Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Codice Colata Heat Code	Colata Fornitore Supplier Heat code	Lotto di Prod. Prod.Ref.Nr.	Cod T.T. H.T. Code	Materiale Material	Q.tà Q.ty
555304	555304	PR24003756	G	A/SA 182 F53	6
IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN					
407642	407642	PR24004421	G	A/SA 182 F53	22
IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004531	G	A/SA 182 F53	6
IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004434	G	A/SA 182 F53	3
IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN					
407642	407642	PR24004422	G	A/SA 182 F53	6
IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN					
346569	346569	PR24004415	C	A/SA 182 F316/F316L	4
IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN					
407642	407642	PR24004423	G	A/SA 182 F53	4
IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN					
E170081	E170081	PR24003023001	G	A/SA 182 F53	29
IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN					
E170081	E170081	PR24003022001	G	A/SA 182 F53	3
IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN					

Analisi Chimiche / Chemical Analysis

Codice Colata Heat Code																
346569	C%	0,0290	Mn%	1,5900	Si%	0,4400	P%	0,0320	S%	0,0250	Cr%	16,6500	Ni%	10,0000	Mo%	2,0300
	Ti%		N%	0,0290	Cu%		Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ											
407642	C%	0,0240	Mn%	0,7500	Si%	0,2600	P%	0,0200	S%	0,0008	Cr%	25,2000	Ni%	6,8500	Mo%	3,8400
	Ti%		N%	0,2625	Cu%	0,1300	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,07

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti S.r.l. NOEMI COSTANZONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1080 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN For Jackscrews diam.1" Thk.3,38mm 150LB RF ASTM A182 Gr.F316/316L

raccortubi Heat num. or Pcs. marking: 346569 - Qty:4,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 23-09-2024

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FORGING FOR ENERGY

Marchio Produttore/Manufacture's Mark

ISO 9001:2015 QMS
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Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

555304	C%	0,0090	Mn%	0,7800	Si%	0,2600	P%	0,0220	S%	0,0008	Cr%	25,2000	Ni%	6,9100	Mo%	3,7900
	Ti%		N%	0,2900	Cu%	0,1200	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,35
E170081	C%	0,0120	Mn%	0,6800	Si%	0,3400	P%	0,0240	S%	0,0010	Cr%	25,1800	Ni%	6,6000	Mo%	3,7800
	Ti%	0,0050	N%	0,2860	Cu%	0,1000	Nb%	0,0170	V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,23

Prove meccaniche / Mechanical tests

Lotto Prod. Prod.Lot Nr.	Codice Colata Heat Code	Snervamento Rp0.2% (MPa)	Rottura Rm (MPa)	Allungamento A% Elong in 2"	Contrazione Z% Reduct	Resilienza -		Impact Test (J)			Media Average	Durezza Hardness HB		
						TIPO	TEMP °C	TEST1	TEST2	TEST3				
PR24003756	555304	578	813	40,3	74	KV	-46	299,10	230,60	200,10	243,30	270	276	273
PR24004421	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004531	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004434	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004422	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004415	346569	400	645	48,5	72							163	160	169
PR24004423	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24003023001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270
PR24003022001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
GALPERTI S.r.l. NOEMI COSTANTONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1080 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN For Jackscrews diam.1" Thk.3,38mm 150LB RF ASTM A182 Gr.F316/316L

raccortubi Heat num. or Pcs. marking: 346569 - Qty:4,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 23-09-2024

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Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Materiale Material	Cod T.T. H.T. Code		Tipo di Trattamento Material treatment	Condizioni di Trattamento Condition Treatment
A/SA 182 F316/F316L	C		Solution Annealed + Wat. Quench	Min 1040° C
A/SA 182 F53	G		Solution Annealed + Wat. Quench	1080°C+-10°C WAT:QUENC.

Note Generali

Additional requirements:
- Satisfactory visual and dimensional check
- Steel making process:Electric Furnace, AOD
- Hardness on the pieces <301HB for material F53
- Holding time for Solution Annealing: 1 h/inch

IMPACT TEST AT 46°C T/2 trasv
Heat / values (J)
555304 / 186,9 - 205,8 - 190,3
407642 / 225,8 - 200,3 - 175,6
E170081 / 122,9 - 108,3 - 155,8

FERRIC CHLORIDE PITTING TEST
ASTM G48 (50°x24h) (full thk weld end)
555304
- corrosion rate: 0,1 g/m2
- No pits have been found at 20x magn
407642
- corrosion rate: 0,03 g/m2
- No pits have been found at 20x magn
E170081
- corrosion rate: 0,2 g/m2
- No pits have been found at 20x magn

DETERMINATION OF FERRITIC VOLUME FRACTION
ASTM E562 + A923 (full thk weld end)
555304
- estimated fraction of ferrite = 49,1%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
407642
- estimated fraction of ferrite = 50%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
E170081

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
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GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1080 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN For Jackscrews diam.1" Thk.3,38mm 150LB RF ASTM A182 Gr.F316/316L

raccortubi Heat num. or Pcs. marking: 346569 - Qty:4,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 23-09-2024

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Certificato di Collaudo **Inspection certificate**	*Certificato n°.* **Certificate n°.**	*Data* **Date**	*Commessa* **Internal Ref.**	*Lista Imballo. N°* **Packing List N°**
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente **Customer reference**	*Cliente* **Client**	*Ordine* **Order**
00636	RACCORTUBI S.P.A.	00005825 REV.1

- estimated fraction of ferrite = 46,6%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected

Heat / Steel plant
555304 / Sandvik
407642 / Bgh Edelstahl
E170081 / Outokumpu

Norms applicable:
- ASTM A182 LAST EDITION
- ASME SA182 LAST EDITION
- PED 2014/68/UE
- Spec. NORSOK M630 ed.7 (2020)
  NORSOK MDS D54 Rev.7
  QTR 02/2017

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galpertisrl.com

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 1080 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN For Jackscrews diam.1" Thk.3,38mm 150LB RF ASTM A182 Gr.F316/316L

raccortubi Heat num. or Pcs. marking: 346569 - Qty:4,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 23-09-2024

Thk.3,38mm 150LB RF ASTM A182 Gr.F316/316L

Order: 1724000839 - 22.04.24 - Item n.: 1080 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010

s. marking: 346569 - Qty:4,00

Protocol: CTCERC20240007270 * CERTIFIED TRUE COPY

* Issued 23-09-2024

Item Detail							Examina
Heat Code	Heat Treatment	Material	Q.ty	Q.ty Examined	Item No.	Description	Result
555304	Solution annealed	A/SA 182 F53	6	6		IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	4	4		IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	3	3		IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	22	22		IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	3	3		IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN	CONFORM
346569	Solution annealed	A/SA 182 F316/F316L	4	4		IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	29	29		IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN	CONFORM

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Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Codice Colata Heat Code	Colata Fornitore Supplier Heat code	Lotto di Prod. Prod.Ref.Nr.	Cod T.T. H.T. Code	Materiale Material	Q.tà Q.ty
555304	555304	PR24003756	G	A/SA 182 F53	6
IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN					
407642	407642	PR24004421	G	A/SA 182 F53	22
IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004531	G	A/SA 182 F53	6
IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004434	G	A/SA 182 F53	3
IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN					
407642	407642	PR24004422	G	A/SA 182 F53	6
IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN					
346569	346569	PR24004415	C	A/SA 182 F316/F316L	4
IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN					
407642	407642	PR24004423	G	A/SA 182 F53	4
IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN					
E170081	E170081	PR24003023001	G	A/SA 182 F53	29
IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN					
E170081	E170081	PR24003022001	G	A/SA 182 F53	3
IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN					

Analisi Chimiche / Chemical Analysis

Codice Colata Heat Code															
346569	C%	0,0290	Mn%	1,5900	Si%	0,4400	P%	0,0320	S%	0,0250	Cr%	16,6500	Ni%	10,0000	Mo%	2,0300
	Ti%		N%	0,0290	Cu%		Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ											
407642	C%	0,0240	Mn%	0,7500	Si%	0,2600	P%	0,0200	S%	0,0008	Cr%	25,2000	Ni%	6,8500	Mo%	3,8400
	Ti%		N%	0,2625	Cu%	0,1300	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,07

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Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1090 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 3/4" S.150 FF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:3,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

555304	C%	0,0090	Mn%	0,7800	Si%	0,2600	P%	0,0220	S%	0,0008	Cr%	25,2000	Ni%	6,9100	Mo%	3,7900
	Ti%		N%	0,2900	Cu%	0,1200	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,35
E170081	C%	0,0120	Mn%	0,6800	Si%	0,3400	P%	0,0240	S%	0,0010	Cr%	25,1800	Ni%	6,6000	Mo%	3,7800
	Ti%	0,0050	N%	0,2860	Cu%	0,1000	Nb%	0,0170	V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,23

Prove meccaniche / Mechanical tests

Lotto Prod. Prod.Lot Nr.	Codice Colata Heat Code	Snervamento Rp0.2% (MPa)	Rottura Rm (MPa)	Allungamento A% Elong in 2"	Contrazione Z% Reduct	Resilienza -		Impact Test (J)			Media Average	Durezza Hardness HB		
						TIPO	TEMP °C	TEST1	TEST2	TEST3				
PR24003756	555304	578	813	40,3	74	KV	-46	299,10	230,60	200,10	243,30	270	276	273
PR24004421	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004531	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004434	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004422	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004415	346569	400	645	48,5	72							163	160	169
PR24004423	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24003023001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270
PR24003022001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270

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galpertisrl.com

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1090 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 3/4" S.150 FF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:3,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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ISO 9001:2015 QMS
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Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Materiale Material	Cod T.T. H.T. Code		Tipo di Trattamento Material treatment	Condizioni di Trattamento Condition Treatment
A/SA 182 F316/F316L	C		Solution Annealed + Wat. Quench	Min 1040° C
A/SA 182 F53	G		Solution Annealed + Wat. Quench	1080°C+-10°C WAT:QUENC.

Note Generali

Additional requirements:
- Satisfactory visual and dimensional check
- Steel making process:Electric Furnace, AOD
- Hardness on the pieces <301HB for material F53
- Holding time for Solution Annealing: 1 h/inch

IMPACT TEST AT 46°C T/2 trasv
Heat / values (J)
555304 / 186,9 - 205,8 - 190,3
407642 / 225,8 - 200,3 - 175,6
E170081 / 122,9 - 108,3 - 155,8

FERRIC CHLORIDE PITTING TEST
ASTM G48 (50°x24h) (full thk weld end)
555304
- corrosion rate: 0,1 g/m2
- No pits have been found at 20x magn
407642
- corrosion rate: 0,03 g/m2
- No pits have been found at 20x magn
E170081
- corrosion rate: 0,2 g/m2
- No pits have been found at 20x magn

DETERMINATION OF FERRITIC VOLUME FRACTION
ASTM E562 + A923 (full thk weld end)
555304
- estimated fraction of ferrite = 49,1%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
407642
- estimated fraction of ferrite = 50%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
E170081

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti s.r.l. NOEMI COSTARONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 1090 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: W.N. 3/4" S.150 FF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:3,00
Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

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ISO 9001:2015 QMS
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Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo **Inspection certificate**	Certificato n°. **Certificate n°.**	Data **Date**	Commessa **Internal Ref.**	Lista Imballo. N° **Packing List N°**
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente **Customer reference**	Cliente **Client**	Ordine **Order**
00636	RACCORTUBI S.P.A.	00005825 REV.1

- estimated fraction of ferrite = 46,6%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected

Heat / Steel plant
555304 / Sandvik
407642 / Bgh Edelstahl
E170081 / Outokumpu

Norms applicable:
- ASTM A182 LAST EDITION
- ASME SA182 LAST EDITION
- PED 2014/68/UE
- Spec. NORSOK M630 ed.7 (2020)
  NORSOK MDS D54 Rev.7
  QTR 02/2017

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti S.r.l. NOEMI COSTALONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 1090 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: W.N. 3/4" S.150 FF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:3,00
Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

cs. marking: 407642 - Qty:3,00

Order: 1724000839 - 22.04.24 - Item n.: 1090 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010

Protocol: CTCERC20240007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

Item Detail							Ex
Heat Code	Heat Treatment	Material	Q.ty	Q.ty Examined	Item No.	Description	Result
555304	Solution annealed	A/SA 182 F53	6	6		IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	4	4		IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	3	3		IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	22	22		IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	3	3		IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN	CONFORM
346569	Solution annealed	A/SA 182 F316/F316L	4	4		IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	29	29		IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN	CONFORM

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Marchio Produttore/Manufacture's Mark

ISO 9001:2015 QMS
approved by LLOYD'S REGISTER
Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Codice Colata Heat Code	Colata Fornitore Supplier Heat code	Lotto di Prod. Prod.Ref.Nr.	Cod T.T. H.T. Code	Materiale Material	Q.tà Q.ty
555304	555304	PR24003756	G	A/SA 182 F53	6
IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN					
407642	407642	PR24004421	G	A/SA 182 F53	22
IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004531	G	A/SA 182 F53	6
IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004434	G	A/SA 182 F53	3
IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN					
407642	407642	PR24004422	G	A/SA 182 F53	6
IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN					
346569	346569	PR24004415	C	A/SA 182 F316/F316L	4
IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN					
407642	407642	PR24004423	G	A/SA 182 F53	4
IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN					
E170081	E170081	PR24003023001	G	A/SA 182 F53	29
IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN					
E170081	E170081	PR24003022001	G	A/SA 182 F53	3
IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN					

Analisi Chimiche / Chemical Analysis

Codice Colata Heat Code															
346569	C%	0,0290	Mn%	1,5900	Si%	0,4400	P%	0,0320	S%	0,0250	Cr%	16,6500	Ni%	10,0000	Mo%	2,0300
	Ti%		N%	0,0290	Cu%		Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ											
407642	C%	0,0240	Mn%	0,7500	Si%	0,2600	P%	0,0200	S%	0,0008	Cr%	25,2000	Ni%	6,8500	Mo%	3,8400
	Ti%		N%	0,2625	Cu%	0,1300	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,07

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Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1100 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1" S.150 FF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:6,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued on 30-07-2024

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EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

555304	C%	0,0090	Mn%	0,7800	Si%	0,2600	P%	0,0220	S%	0,0008	Cr%	25,2000	Ni%	6,9100	Mo%	3,7900
	Ti%		N%	0,2900	Cu%	0,1200	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,35
E170081	C%	0,0120	Mn%	0,6800	Si%	0,3400	P%	0,0240	S%	0,0010	Cr%	25,1800	Ni%	6,6000	Mo%	3,7800
	Ti%	0,0050	N%	0,2860	Cu%	0,1000	Nb%	0,0170	V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,23

Prove meccaniche / Mechanical tests

Lotto Prod. Prod.Lot Nr.	Codice Colata Heat Code	Snervamento Rp0.2% (MPa)	Rottura Rm (MPa)	Allungamento A% Elong in 2"	Contrazione Z% Reduct	Resilienza - TIPO	Resilienza - TEMP °C	Impact Test (J) TEST1	TEST2	TEST3	Media Average	Durezza Hardness HB		
PR24003756	555304	578	813	40,3	74	KV	-46	299,10	230,60	200,10	243,30	270	276	273
PR24004421	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004531	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004434	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004422	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004415	346569	400	645	48,5	72							163	160	169
PR24004423	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24003023001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270
PR24003022001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270

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Description: W.N. 1" S.150 FF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:6,00

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EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Materiale Material	Cod T.T. H.T. Code		Tipo di Trattamento Material treatment	Condizioni di Trattamento Condition Treatment
A/SA 182 F316/F316L	C		Solution Annealed + Wat. Quench	Min 1040° C
A/SA 182 F53	G		Solution Annealed + Wat. Quench	1080°C+-10°C WAT:QUENC.

Note Generali

Additional requirements:
- Satisfactory visual and dimensional check
- Steel making process:Electric Furnace, AOD
- Hardness on the pieces <301HB for material F53
- Holding time for Solution Annealing: 1 h/inch

IMPACT TEST AT 46°C T/2 trasv
Heat / values (J)
555304 / 186,9 - 205,8 - 190,3
407642 / 225,8 - 200,3 - 175,6
E170081 / 122,9 - 108,3 - 155,8

FERRIC CHLORIDE PITTING TEST
ASTM G48 (50°x24h) (full thk weld end)
555304
- corrosion rate: 0,1 g/m2
- No pits have been found at 20x magn
407642
- corrosion rate: 0,03 g/m2
- No pits have been found at 20x magn
E170081
- corrosion rate: 0,2 g/m2
- No pits have been found at 20x magn

DETERMINATION OF FERRITIC VOLUME FRACTION
ASTM E562 + A923 (full thk weld end)
555304
- estimated fraction of ferrite = 49,1%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
407642
- estimated fraction of ferrite = 50%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
E170081

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Description: W.N. 1" S.150 FF SCH.40/S

raccortubi Heat num. or Pcs. marking: 407642 - Qty:6,00

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Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

- estimated fraction of ferrite = 46,6%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected

Heat / Steel plant
555304 / Sandvik
407642 / Bgh Edelstahl
E170081 / Outokumpu

Norms applicable:
- ASTM A182 LAST EDITION
- ASME SA182 LAST EDITION
- PED 2014/68/UE
- Spec. NORSOK M630 ed.7 (2020)
  NORSOK MDS D54 Rev.7
  QTR 02/2017

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Item Detail							Ex
Heat Code	Heat Treatment	Material	Q.ty	Q.ty Examined	Item No.	Description	Result
555304	Solution annealed	A/SA 182 F53	6	6		IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	4	4		IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	3	3		IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	22	22		IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	3	3		IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN	CONFORM
346569	Solution annealed	A/SA 182 F316/F316L	4	4		IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	29	29		IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN	CONFORM

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Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Codice Colata Heat Code	Colata Fornitore Supplier Heat code	Lotto di Prod. Prod.Ref.Nr.	Cod T.T. H.T. Code	Materiale Material	Q.tà Q.ty
555304	555304	PR24003756	G	A/SA 182 F53	6
IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN					
407642	407642	PR24004421	G	A/SA 182 F53	22
IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004531	G	A/SA 182 F53	6
IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004434	G	A/SA 182 F53	3
IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN					
407642	407642	PR24004422	G	A/SA 182 F53	6
IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN					
346569	346569	PR24004415	C	A/SA 182 F316/F316L	4
IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN					
407642	407642	PR24004423	G	A/SA 182 F53	4
IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN					
E170081	E170081	PR24003023001	G	A/SA 182 F53	29
IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN					
E170081	E170081	PR24003022001	G	A/SA 182 F53	3
IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN					

Analisi Chimiche / Chemical Analysis

Codice Colata Heat Code															
346569	C%	0,0290	Mn%	1,5900	Si%	0,4400	P%	0,0320	S%	0,0250	Cr%	16,6500	Ni%	10,0000	Mo%	2,0300
	Ti%		N%	0,0290	Cu%		Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ											
407642	C%	0,0240	Mn%	0,7500	Si%	0,2600	P%	0,0200	S%	0,0008	Cr%	25,2000	Ni%	6,8500	Mo%	3,8400
	Ti%		N%	0,2625	Cu%	0,1300	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,07

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Description: W.N. 1.1/2" S.150 FF SCH.40/S

raccortubi Heat num. or Pcs. marking: E170081 - Qty:3,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
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00636	RACCORTUBI S.P.A.	00005825 REV.1

555304	C%	0,0090	Mn%	0,7800	Si%	0,2600	P%	0,0220	S%	0,0008	Cr%	25,2000	Ni%	6,9100	Mo%	3,7900
	Ti%		N%	0,2900	Cu%	0,1200	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,35
E170081	C%	0,0120	Mn%	0,6800	Si%	0,3400	P%	0,0240	S%	0,0010	Cr%	25,1800	Ni%	6,6000	Mo%	3,7800
	Ti%	0,0050	N%	0,2860	Cu%	0,1000	Nb%	0,0170	V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,23

Prove meccaniche / Mechanical tests

Lotto Prod. Prod.Lot Nr.	Codice Colata Heat Code	Snervamento Rp0.2% (MPa)	Rottura Rm (MPa)	Allungamento A% Elong in 2"	Contrazione Z% Reduct	Resilienza - TIPO	 TEMP °C	Impact Test (J) TEST1	 TEST2	 TEST3	Media Average	Durezza Hardness HB		
PR24003756	555304	578	813	40,3	74	KV	-46	299,10	230,60	200,10	243,30	270	276	273
PR24004421	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004531	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004434	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004422	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004415	346569	400	645	48,5	72							163	160	169
PR24004423	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24003023001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270
PR24003022001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270

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Description: W.N. 1.1/2" S.150 FF SCH.40/S

raccortubi Heat num. or Pcs. marking: E170081 - Qty:3,00

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Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Materiale Material	Cod T.T. H.T. Code		Tipo di Trattamento Material treatment	Condizioni di Trattamento Condition Treatment
A/SA 182 F316/F316L	C		Solution Annealed + Wat. Quench	Min 1040° C
A/SA 182 F53	G		Solution Annealed + Wat. Quench	1080°C+-10°C WAT:QUENC.

Note Generali

Additional requirements:
- Satisfactory visual and dimensional check
- Steel making process:Electric Furnace, AOD
- Hardness on the pieces <301HB for material F53
- Holding time for Solution Annealing: 1 h/inch

IMPACT TEST AT 46°C T/2 trasv
Heat / values (J)
555304 / 186,9 - 205,8 - 190,3
407642 / 225,8 - 200,3 - 175,6
E170081 / 122,9 - 108,3 - 155,8

FERRIC CHLORIDE PITTING TEST
ASTM G48 (50°x24h) (full thk weld end)
555304
- corrosion rate: 0,1 g/m2
- No pits have been found at 20x magn
407642
- corrosion rate: 0,03 g/m2
- No pits have been found at 20x magn
E170081
- corrosion rate: 0,2 g/m2
- No pits have been found at 20x magn

DETERMINATION OF FERRITIC VOLUME FRACTION
ASTM E562 + A923 (full thk weld end)
555304
- estimated fraction of ferrite = 49,1%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
407642
- estimated fraction of ferrite = 50%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
E170081

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti s.r.l. NOEMI COSTADONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 1110 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: W.N. 1.1/2" S.150 FF SCH.40/S

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FORGING FOR ENERGY

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ISO 9001:2015 QMS
approved by LLOYD'S REGISTER
Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo **Inspection certificate**	Certificato n°. **Certificate n°.**	Data **Date**	Commessa **Internal Ref.**	Lista Imballo. N° **Packing List N°**
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente **Customer reference**	Cliente **Client**	Ordine **Order**
00636	RACCORTUBI S.P.A.	00005825 REV.1

- estimated fraction of ferrite = 46,6%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected

Heat / Steel plant
555304 / Sandvik
407642 / Bgh Edelstahl
E170081 / Outokumpu

Norms applicable:
- ASTM A182 LAST EDITION
- ASME SA182 LAST EDITION
- PED 2014/68/UE
- Spec. NORSOK M630 ed.7 (2020)
  NORSOK MDS D54 Rev.7
  QTR 02/2017

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti S.r.l. NOEMI COSTALONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 1110 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: W.N. 1.1/2" S.150 FF SCH.40/S

raccortubi Heat num. or Pcs. marking: E170081 - Qty:3,00
Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

s. marking: E170081 - Qty:3,00

Order: 1724000839 - 22.04.24 - Item n.: 1110 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010

Protocol: CTCERC20240007270 * CERTIFIED TRUE COPY
* Issued 30-07-2024

Item Detail							Ex
Heat Code	Heat Treatment	Material	Q.ty	Q.ty Examined	Item No.	Description	Result
555304	Solution annealed	A/SA 182 F53	6	6		IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	4	4		IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	3	3		IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	22	22		IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	3	3		IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN	CONFORM
346569	Solution annealed	A/SA 182 F316/F316L	4	4		IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	29	29		IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN	CONFORM

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ISO 9001:2015 QMS
approved by LLOYD'S REGISTER
Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Codice Colata Heat Code	Colata Fornitore Supplier Heat code	Lotto di Prod. Prod.Ref.Nr.	Cod T.T. H.T. Code	Materiale Material	Q.tà Q.ty
555304	555304	PR24003756	G	A/SA 182 F53	6
IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN					
407642	407642	PR24004421	G	A/SA 182 F53	22
IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004531	G	A/SA 182 F53	6
IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN					
407642	407642	PR24004434	G	A/SA 182 F53	3
IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN					
407642	407642	PR24004422	G	A/SA 182 F53	6
IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN					
346569	346569	PR24004415	C	A/SA 182 F316/F316L	4
IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN					
407642	407642	PR24004423	G	A/SA 182 F53	4
IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN					
E170081	E170081	PR24003023001	G	A/SA 182 F53	29
IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN					
E170081	E170081	PR24003022001	G	A/SA 182 F53	3
IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN					

Analisi Chimiche / Chemical Analysis

Codice Colata Heat Code															
346569	C%	0,0290	Mn%	1,5900	Si%	0,4400	P%	0,0320	S%	0,0250	Cr%	16,6500	Ni%	10,0000	Mo%	2,0300
	Ti%		N%	0,0290	Cu%		Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ											
407642	C%	0,0240	Mn%	0,7500	Si%	0,2600	P%	0,0200	S%	0,0008	Cr%	25,2000	Ni%	6,8500	Mo%	3,8400
	Ti%		N%	0,2625	Cu%	0,1300	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,07

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti S.r.l. NOEMI COSTADONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1150 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN For Jackscrews diam.1" Thk.3,38mm 150LB RF ASTM A182 Gr.F53

raccortubi Heat num. or Pcs. marking: 407642 - Qty:4,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 23-09-2024

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Marchio Produttore/Manufacture's Mark

ISO 9001:2015 QMS
approved by LLOYD'S REGISTER
Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

555304	C%	0,0090	Mn%	0,7800	Si%	0,2600	P%	0,0220	S%	0,0008	Cr%	25,2000	Ni%	6,9100	Mo%	3,7900
	Ti%		N%	0,2900	Cu%	0,1200	Nb%		V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,35
E170081	C%	0,0120	Mn%	0,6800	Si%	0,3400	P%	0,0240	S%	0,0010	Cr%	25,1800	Ni%	6,6000	Mo%	3,7800
	Ti%	0,0050	N%	0,2860	Cu%	0,1000	Nb%	0,0170	V%		Al%		Sn%		O%	
	Fe%		H%		Ca%		B%		Co%		Pb%		W%		Sb%	
	As%		Zr%		CEQ										PREN	42,23

Prove meccaniche / Mechanical tests

Lotto Prod. Prod.Lot Nr.	Codice Colata Heat Code	Snervamento Rp0.2% (MPa)	Rottura Rm (MPa)	Allungamento A% Elong in 2"	Contrazione Z% Reduct	Resilienza - TIPO	Resilienza - TEMP °C	Impact Test (J) TEST1	TEST2	TEST3	Media Average	Durezza Hardness HB		
PR24003756	555304	578	813	40,3	74	KV	-46	299,10	230,60	200,10	243,30	270	276	273
PR24004421	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004531	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004434	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004422	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24004415	346569	400	645	48,5	72							163	160	169
PR24004423	407642	580	800	42,6	72	KV	-46	233,90	265,60	208,10	235,90	244	249	240
PR24003023001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270
PR24003022001	E170081	578	800	42	73	KV	-46	174,60	133,90	190,10	166,20	274	277	270

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
GALPERTI S.r.l. NOEMI COSTANZONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1150 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN For Jackscrews diam.1" Thk.3,38mm 150LB RF ASTM A182 Gr.F53

raccortubi Heat num. or Pcs. marking: 407642 - Qty:4,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 23-09-2024

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ISO 9001:2015 QMS
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Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo Inspection certificate	Certificato n°. Certificate n°.	Data Date	Commessa Internal Ref.	Lista Imballo. N° Packing List N°
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente Customer reference	Cliente Client	Ordine Order
00636	RACCORTUBI S.P.A.	00005825 REV.1

Materiale Material	Cod T.T. H.T. Code		Tipo di Trattamento Material treatment	Condizioni di Trattamento Condition Treatment
A/SA 182 F316/F316L	C		Solution Annealed + Wat. Quench	Min 1040° C
A/SA 182 F53	G		Solution Annealed + Wat. Quench	1080°C+-10°C WAT:QUENC.

Note Generali

Additional requirements:
- Satisfactory visual and dimensional check
- Steel making process:Electric Furnace, AOD
- Hardness on the pieces <301HB for material F53
- Holding time for Solution Annealing: 1 h/inch

IMPACT TEST AT 46°C T/2 trasv
Heat / values (J)
555304 / 186,9 - 205,8 - 190,3
407642 / 225,8 - 200,3 - 175,6
E170081 / 122,9 - 108,3 - 155,8

FERRIC CHLORIDE PITTING TEST
ASTM G48 (50°x24h) (full thk weld end)
555304
- corrosion rate: 0,1 g/m2
- No pits have been found at 20x magn
407642
- corrosion rate: 0,03 g/m2
- No pits have been found at 20x magn
E170081
- corrosion rate: 0,2 g/m2
- No pits have been found at 20x magn

DETERMINATION OF FERRITIC VOLUME FRACTION
ASTM E562 + A923 (full thk weld end)
555304
- estimated fraction of ferrite = 49,1%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
407642
- estimated fraction of ferrite = 50%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected
E170081

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti s.r.l. NORMI COSTADONI-QC		

GALPERTI SRL
Via Provinciale 20/22 - 23813 - Cortenova - LC - Italy Tel. +39 0341 988011 | Email: info@galpertisrl.com
galpertisrl.com

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 1150 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: Flange WN For Jackscrews diam.1" Thk.3,38mm 150LB RF ASTM A182 Gr.F53

raccortubi Heat num. or Pcs. marking: 407642 - Qty:4,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 23-09-2024

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ISO 9001:2015 QMS
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Cert. No 10469041 and No 10469042

certificates@galpertisrl.com

Certificato di Collaudo **Inspection certificate**	Certificato n°. **Certificate n°.**	Data **Date**	Commessa **Internal Ref.**	Lista Imballo. N° **Packing List N°**
EN 10204 3.1	770	29/07/2024	VO24-0376	PL2408595

Codice Cliente **Customer reference**	Cliente **Client**	Ordine **Order**
00636	RACCORTUBI S.P.A.	00005825 REV.1

- estimated fraction of ferrite = 46,6%
- Ferritic-austenitic microstructure, free from grain boundaries carbides and intermetallic phases.
- Classification of etch structure: unaffected

Heat / Steel plant
555304 / Sandvik
407642 / Bgh Edelstahl
E170081 / Outokumpu

Norms applicable:
- ASTM A182 LAST EDITION
- ASME SA182 LAST EDITION
- PED 2014/68/UE
- Spec. NORSOK M630 ed.7 (2020)
  NORSOK MDS D54 Rev.7
  QTR 02/2017

REDATTO DA / PRINTED BY	APPROVATO DA / APPROVED BY	ENTE COLLAUDATORE / INSPECTING AGENCY
Galperti S.r.l. NOEMI COSTADONI-QC		

GALPERTI SRL
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galpertisrl.com

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1150 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN For Jackscrews diam.1" Thk.3,38mm 150LB RF ASTM A182 Gr.F53

raccortubi Heat num. or Pcs. marking: 407642 - Qty:4,00

Protocol: CTCERC202400007270 * CERTIFIED TRUE COPY
* Issued 23-09-2024

Thk.3,38mm 150LB RF ASTM A182 Gr.F53

Order: 1724000839 - 22.04.24 - Item n.: 1150 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010

cs. marking: 407642 - Qty:4,00

Protocol: CTCERC20240007270 * CERTIFIED TRUE COPY

* Issued 23-09-2024

Item Detail							Examina
Heat Code	Heat Treatment	Material	Q.ty	Q.ty Examined	Item No.	Description	Result
555304	Solution annealed	A/SA 182 F53	6	6		IT. 4 WN 150 2" RF SC10S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 5 WN 150 3/4" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	6	6		IT. 9 WN 150 1" FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	4	4		IT. 11 WN 150 1" RF SC40S F53 B16.5 WITH JS HOLE FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	3	3		IT. 10 WN 150 1"1/2 FF SC40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	22	22		IT. 3 WN 150 1" RF SCSTD/40S F53 B16.5 FIN	CONFORM
407642	Solution annealed	A/SA 182 F53	3	3		IT. 8 WN 150 3/4" FF SC40S F53 B16.5 FIN	CONFORM
346569	Solution annealed	A/SA 182 F316/F316L	4	4		IT. 7 WN 150 1" RF SC40S F316/L B16.5 WITH HOLE JS FIN	CONFORM
E170081	Solution annealed	A/SA 182 F53	29	29		IT. 6 WN 150 1"1/2 RF SC40S F53 B16.5 FIN	CONFORM

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724000839	123A30A	Q012400638

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani 02.09.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 4920246632236
Invoice/ddt No: 236
Invoice/ddt date: 06/08/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **CLAIM 108/2024/DDT 2840/COMM 1885**

Gasket description:

INSULATION KIT

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted**.
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5952900
P.IVA 04158010271 - info@cfservice.it

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
INSULATION KITS FLANGE TYPE F 4" 300 Kit made by: -) No.1 G10 insulating sleeve per each bolt -) No.2 G10 insulating washers per each bolt -) No.2 ZPS washers per each bolt Code :	8,000

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5952900
P.IVA 04184610271 • info@cfservice.srl

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 4920246632236-A
Invoice/ddt No: 236
Invoice/ddt date: 06/08/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **CLAIM 108/2024/DDT 2840/COMM 1885**

Gasket description:

GASKET CF3090

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted**.
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE
CF SERVICE S.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.45681 Fax 041.5952900
P.IVA 04136610271 • info@cfservice.it

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
GASKET CF3090 4" 300 TYPE F THK.3MM Code :	8,000

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.5685162 Fax 041.5952900
P.IVA 02158610271 • info@cfservice.ve.it

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724000839	123A90A	Q012400637

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

02.09.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 06/08/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	SEE BELOW
Prot. N.	00007483
Packing list	PLPLIS202400007442
Ns. Rif.	00002010
Vs. Rif.	1724000839 - 22.04.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00007483

06/08/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
1640	20	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=110mm	78606 CTCERT202400005403_1.0001.TIF
1780	20	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-" L=120mm	297755 CTCERT202400005404_1.0001.TIF CTCERT202400005404_1.0002.TIF

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00007483

06/08/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
			TIRANTI FILETTATI CON 2 DADI:	
1640	20	NR	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-'' L=110mm	78606
1780	20	NR	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-'' L=120mm	297755

raccortubi

00007483

06/08/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 06/08/2024
Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				TIRANTI FILETTATI CON 2 DADI:	
1640	NR	20	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=110mm	78606
1780	NR	20	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-" L=120mm	297755

PRESSBOLT

Pressbolt s.r.l. con unico socio
Partita Iva 03231770136
Via dell'Artigianato, 12 - 22078 - Turate (CO)
Tel. +39 02 96.97.98.50 - Fax +39 02 96.97.98.29
email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3168026	0	02 August 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	18	Item	350
Job		Shipping ref.	3412358 of 01 August 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 7/8"-9 UNCX0120 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
78606	20	P1679762	0001230008

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.43	0.76	0.27	0.018	0.028	0.99	0.2	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	Min 14	min 50
Actual	947	845	18.2	59

	Hardness "HB"	Impact Test +20 C "J"
Required	max 321	min med 27 J
Actual	292;292;292	59;53;61

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.p.A.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003168026 Rev. 000 of 02 August 2024 - Page 1/4

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1640 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=110mm

raccortubi Heat num. or Pcs. marking: 78606 - Qty:20,00

Protocol: CTCERC202400007483 * CERTIFIED TRUE COPY
* In data 06-08-2024

PRESSBOLT

Pressbolt s.r.l. con unico socio
Partita Iva 03231770136
Via dell'Artigianato, 12 - 22078 - Turate (CO)
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email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3168026	0	02 August 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	18	Item	360
Job		Shipping ref.	3412358 of 01 August 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 7/8"-9 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
22982	40	P1688083	0001230009

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.450	0.720	0.230	0.012	0.025

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	312;286;318	49;43;48
Required	Hardness test after Termical Tr		
Actual	Min. 179 263;251;257		

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.p.A.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003168026 Rev. 000 of 02 August 2024 - Page 2/4

PRESSBOLT

Pressbolt s.r.l. con unico socio
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email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3168026	0	02 August 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	4	Item	70
Job		Shipping ref.	3412358 of 01 August 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 3/4"-10 UNCX0110 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
297755	20	P1679760	0001230006

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.409	0.824	0.283	0.009	0.003	1.022	0.205	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	Min 14	min 50
Actual	990	795	21.4	56.2

	Hardness "HB"	Impact Test +20 C "J"
Required	max 321	min med 27 J
Actual	295;295;295	69;64;57

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003168026 Rev. 000 of 02 August 2024 - Page 3/4

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1780 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-" L=120mm

raccortubi Heat num. or Pcs. marking: 297755 - Qty:20,00

Protocol: CTCERC202400007483 * CERTIFIED TRUE COPY * 02-08-2024

Pressbolt s.r.l. con unico socio
Partita Iva 03231770136
Via dell'Artigianato, 12 - 22078 - Turate (CO)
Tel. +39 02 96.97.98.50 - Fax +39 02 96.97.98.29
email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3168026	0	02 August 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	4	Item	80
Job		Shipping ref.	3412358 of 01 August 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 3/4"-10 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
559914	40	P1641375	0001230007

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.730	0.190	0.011	0.005

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	304;291;284	47;47;42
Required	Hardness test after Termical Tr		
Actual	Min. 179 243;258;241		

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003168026 Rev. 000 of 02 August 2024 - Page 4/4

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1780 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-" L=120mm

raccortubi Heat num. or Pcs. marking: 297755 - Qty:20,00

Protocol: CTCERC202400007483 * CERTIFIED TRUE COPY
* Issued on 08-08-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724000839	123A90A	Q012400602

ROSETTI MARINO

ROSETTI MARINO
Conforme alla spec. PO
According to the spc.----------.
TMUGF Firma / MTSMD Signature
Data / Date
Sonia Emiliani 24/07/2024
Sonia Emiliani
☒ REVIEW
☐ WITNESS

CUSTOMER

NOTE

raccortubi

00007059

24/07/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00002010

Ordine N. P.O. number: 1724000839 - 22.04.24

123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
1610	80	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=85mm	103540 CTCERT202400005000_1.0001.TIF CTCERT202400005000_1.0002.TIF
1620	180	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=95mm	103540 CTCERT202400005001_1.0001.TIF CTCERT202400005001_1.0002.TIF
1630	20	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=100mm	103540 CTCERT202400005002_1.0001.TIF CTCERT202400005002_1.0002.TIF
1650	180	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=70mm	111462 CTCERT202400005003_1.0001.TIF CTCERT202400005003_1.0002.TIF
1660	40	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=80mm	091205 CTCERT202400005004_1.0001.TIF CTCERT202400005004_1.0002.TIF
1670	750	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=65mm	111462 CTCERT202400005005_1.0001.TIF CTCERT202400005005_1.0002.TIF
1680	550	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4" L=115mm	246827 CTCERT202400005006_1.0001.TIF CTCERT202400005006_1.0002.TIF
1690	250	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4" L=125mm	246827 CTCERT202400005007_1.0001.TIF CTCERT202400005007_1.0002.TIF
1700	600	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=80mm	103540 CTCERT202400005008_1.0001.TIF CTCERT202400005008_1.0002.TIF

raccortubi

00007059

24/07/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
1710	30	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=105mm	246827 CTCERT202400005009_1.0001.TIF CTCERT202400005009_1.0002.TIF
1720	280	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=90mm	103540 CTCERT202400005010_1.0001.TIF CTCERT202400005010_1.0002.TIF
1730	20	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=105mm	103540 CTCERT202400005011_1.0001.TIF CTCERT202400005011_1.0002.TIF
1740	140	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=75mm	125796 CTCERT202400005012_1.0001.TIF CTCERT202400005012_1.0002.TIF
1750	30	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=60mm	091205 CTCERT202400005013_1.0001.TIF CTCERT202400005013_1.0002.TIF
1760	60	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=130mm	297755 CTCERT202400005014_1.0001.TIF CTCERT202400005014_1.0002.TIF
1770	40	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-" L=135mm	78606 CTCERT202400005015_1.0001.TIF CTCERT202400005015_1.0002.TIF
1790	80	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=95mm	128623 CTCERT202400005016_1.0001.TIF CTCERT202400005016_1.0002.TIF
1800	60	Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=65mm	111462 CTCERT202400005017_1.0001.TIF CTCERT202400005017_1.0002.TIF CTCERT202400005017_1.0003.TIF

raccortubi

00007059

24/07/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				TIRANTI FILETTATI CON 2 DADI:	
1610	NR	80	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-'' L=85mm	103540
1620	NR	180	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-'' L=95mm	103540
1630	NR	20	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-'' L=100mm	103540
1650	NR	180	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-'' L=70mm	111462
1660	NR	40	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-'' L=80mm	091205
1670	NR	750	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-'' L=65mm	111462
1680	NR	550	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4'' L=115mm	246827
1690	NR	250	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4'' L=125mm	246827

raccortubi

00007059

24/07/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
1700	NR	600	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=80mm	103540
1710	NR	30	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=105mm	246827
1720	NR	280	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=90mm	103540
1730	NR	20	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=105mm	103540
1740	NR	140	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=75mm	125796
1750	NR	30	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=60mm	091205
1760	NR	60	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=130mm	297755
1770	NR	40	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-" L=135mm	78606

raccortubi

00007059

24/07/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00002010

Ordine N. P.O. number: 1724000839 - 22.04.24

123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine

Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
1790	NR	80	0.00	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=95mm	128623
1800	NR	60	0.00	Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=65mm	111462

PRESSBOLT

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Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	1	Item	10
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0085 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	80	P1679686	0001225773

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.770	0.219	0.012	0.025	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1001	796	23.6	60.3

	Elongation % 4D
Required	Min 14
Actual	20.8

	Hardness "HB"	Impact Test T Room "J"
Required	max 321	min med 27 J
Actual	301;300;299	62;60;63

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 1/37

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	1	Item	20
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
P0JS1900A17658	160	P1653697	0001225774

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.638	0.205	0.013	0.024

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	313;318;302	50;49;47
Required	Hardness test after Termical Tr		
Actual	Min. 179 258;258;258		

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 2/37

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 1610 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=85mm

raccortubi Heat num. or Pcs. marking: 103540 - Qty:80,00

Protocol: CTCERC202400007059 * CERTIFIED TRUE COPY
* Issued 24-07-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	2	Item	30
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0095 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	180	P1679689	0001225775

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.77	0.219	0.012	0.0252	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	Min 14	min 50
Actual	1003	797	23.5	60.3

	Hardness "HB"	Impact Test +20 C "J"
Required	max 321	min med 27 J
Actual	301;301;301	59;67;62

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 21/37

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 1620 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=95mm

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	2	Item	40
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
P0JS1900A17658	360	P1653697	0001225776

Chemical Analysis "%"

	C	Mn	Si	P	S	
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05	
Actual	0.440	0.638	0.205	0.013	0.024	

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	313;318;302	50;49;47
Required	Hardness test after Termical Tr		
Actual	Min. 179 258;258;258		

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 22/37

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	3	Item	50
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0100 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	20	P1679690	0001225777

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.770	0.219	0.012	0.025	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	Min 14	min 50
Actual	1001	796	23.6	60.3

	Hardness "HB"	Impact Test T Room "J"
Required	max 321	min med 27 J
Actual	301;300;299	69;62;65

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 26/37

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	3	Item	60
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
P0JS1900A17658	40	P1653697	0001225778

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.638	0.205	0.013	0.024

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	313;318;302	50;49;47
Required	Hardness test after Termical Tr		
Actual	Min. 179 258;258;258		

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 27/37

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1630 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=100mm

raccortubi Heat num. or Pcs. marking: 103540 - Qty:20,00

Protocol: CTCERC202400007059 * CERTIFIED TRUE COPY
* Issued 24-07-2024

Pressbolt s.r.l. con unico socio
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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	5	Item	90
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0070 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
111462	180	P1679682	0001225779

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.42	0.79	0.23	0.01	0.025	1.05	0.17	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	Min 14	min 50
Actual	1049.7	977.6	22.2	56.5

	Hardness "HB"
Required	max 321
Actual	315;315;315

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 28/37

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1650 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=70mm

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Pressbolt s.r.l. con unico socio
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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	5	Item	100
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	360	P1610274	0001225780

Chemical Analysis "%"

	C	Mn	Si	P	S	
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05	
Actual	0.45	0.70	0.23	0.012	0.022	

	Proof Load	Hardness "HB"	HB after H.T. 24h
Required	Positive	max 327	Min. 179
Actual	Positive	295;301;296	258;292;299

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 29/37

PRESSBOLT

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	6	Item	110
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0080 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
091205	40	P1679683	0001225781

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.410	0.762	0.222	0.011	0.026	1.054	0.177	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1060.6	849.9	20.9	56.8

	Elongation % 4D
Required	Min 14
Actual	18.4

	Hardness "HB"
Required	max 321
Actual	319;320;317

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 30/37

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VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	6	Item	120
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	80	P1610274	0001225782

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.45	0.70	0.23	0.012	0.022

	Proof Load	Hardness "HB"	HB after H.T. 24h
Required	Positive	max 327	Min. 179
Actual	Positive	295;301;296	258;292;299

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 31/37

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1660 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=80mm

raccortubi Heat num. or Pcs. marking: 091205 - Qty:40,00

Protocol: CTCERC202400007059 * CERTIFIED TRUE COPY * Issued 24-07-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	7	Item	130
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0065 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
111462	750	P1679681	0001225783

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.42	0.79	0.23	0.01	0.025	1.05	0.17	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	Min 14	min 50
Actual	1049.7	977.6	22.2	56.5

	Hardness "HB"
Required	max 321
Actual	315;315;315

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 32/37

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	7	Item	140
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	1500	P1610274	0001225784

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.45	0.70	0.23	0.012	0.022

	Proof Load	Hardness "HB"	HB after H.T. 24h
Required	Positive	max 327	Min. 179
Actual	Positive	295;301;296	258;292;299

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 33/37

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	8	Item	150
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 3/4"-10 UNCX0115 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
246827	550	P1679695	0001225785

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.430	0.830	0.240	0.017	0.010	0.970	0.210	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	978	780	22.9	60.5

	Elongation % 4D
Required	Min 14
Actual	20.2

	Hardness "HB"	Impact Test T Room "J"
Required	max 321	min med 27 J
Actual	292;291;289	61;55;59

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 34/37

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1680 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4" L=115mm

raccortubi Heat num. or Pcs. marking: 246827 - Qty:550,00

Protocol: CTCERC202400007059 * CERTIFIED TRUE COPY
* Issued 24-07-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	8	Item	160
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 3/4"-10 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
559914	1100	P1641375	0001225786

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.730	0.190	0.011	0.005

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	304;291;284	47;47;42
Required	Hardness test after Termical Tr		
Actual	Min. 179 243;258;241		

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 35/37

PRESSBOLT

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	9	Item	170
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 3/4"-10 UNCX0125 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
246827	250	P1679696	0001225787

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.430	0.830	0.240	0.017	0.010	0.970	0.210	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	978	780	22.9	60.5

	Elongation % 4D
Required	Min 14
Actual	20.2

	Hardness "HB"	Impact Test T Room "J"
Required	max 321	min med 27 J
Actual	292;291;289	58;58;68

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 36/37

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	9	Item	180
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 3/4"-10 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
559914	500	P1641375	0001225788

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.730	0.190	0.011	0.005

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	304;291;284	47;47;42
Required	Hardness test after Termical Tr		
Actual	Min. 179 243;258;241		

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 37/37

PRESSBOLT

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	10	Item	190
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0080 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	600	P1679684	0001225789

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.77	0.219	0.012	0.0252	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	Min 14	min 50
Actual	1003	797	23.5	60.3

	Hardness "HB"	Impact Test +20 C "J"
Required	max 321	min med 27 J
Actual	301;301;301	67;56;66

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 1700 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=80mm

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	10	Item	200
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
P0JS1900A17658	1200	P1653697	0001225790

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.638	0.205	0.013	0.024

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	313;318;302	50;49;47

	Hardness test after Termical Tr
Required	Min. 179
Actual	258;258;258

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 4/37

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1700 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=80mm

raccortubi Heat num. or Pcs. marking: 103540 - Qty:600,00

Protocol: CTCERC202400007059 * CERTIFICATE COPY
* Issued 24-07-2024

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Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	11	Item	210
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 3/4"-10 UNCX0105 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
246827	30	P1679693	0001225791

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.430	0.830	0.240	0.017	0.010	0.970	0.210	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	978	780	22.9	60.5

	Elongation % 4D
Required	Min 14
Actual	20.2

	Hardness "HB"	Impact Test T Room "J"
Required	max 321	min med 27 J
Actual	292;291;289	69;54;54

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 5/37

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1710 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=105mm

raccortubi Heat num. or Pcs. marking: 246827 - Qty:30,00 Protocol: CTCERC202400007059 * CERTIFIED TRUE COPY * Issued 24-07-2024

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Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	11	Item	220
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 3/4"-10 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
559914	60	P1641375	0001225792

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.730	0.190	0.011	0.005

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	304;291;284	47;47;42
Required	Hardness test after Termical Tr		
Actual	Min. 179 243;258;241		

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 6/37

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1710 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=105mm

raccortubi Heat num. or Pcs. marking: 246827 - Qty:30,00

Protocol: CTCERC202400007059 * CERTIFIED TRUE COPY
* Issued 24-07-2024

PRESSBOLT

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	12	Item	230
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0090 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	280	P1679759	0001225793

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.770	0.219	0.012	0.025	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1001	796	23.6	60.3

	Elongation % 4D
Required	Min 14
Actual	20.8

	Hardness "HB"	Impact Test T Room "J"
Required	max 321	min med 27 J
Actual	301;300;299	54;62;53

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 7/37

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	12	Item	240
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
P0JS1900A17658	560	P1653697	0001225794

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.638	0.205	0.013	0.024

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	313;318;302	50;49;47
Required	Hardness test after Termical Tr		
Actual	Min. 179 258;258;258		

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 8/37

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	13	Item	250
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0105 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	20	P1679691	0001225795

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.770	0.219	0.012	0.025	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1001	796	23.6	60.3

	Elongation % 4D
Required	Min 14
Actual	20.8

	Hardness "HB"	Impact Test T Room "J"
Required	max 321	min med 27 J
Actual	301;300;299	65;66;62

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 9/37

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	13	Item	260
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
P0JS1900A17658	40	P1653697	0001225796

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.638	0.205	0.013	0.024

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	313;318;302	50;49;47
Required	Hardness test after Termical Tr		
Actual	Min. 179 258;258;258		

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 10/37

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1730 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=105mm

raccortubi Heat num. or Pcs. marking: 103540 - Qty:20,00

Protocol: CTCERC202400007059 * CERTIFIED TRUE COPY
* Issued 24-07-2024

Pressbolt s.r.l. con unico socio
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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	14	Item	270
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0075 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
125796	140	P1631450	0001225797

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.400	0.870	0.260	0.014	0.003	1.020	0.210	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	977.9	786.2	19.6	53.2

	Elongation % 4D
Required	Min 14
Actual	17.2

	Hardness "HB"	Impact Test T Room "J"
Required	max 321	min med 27 J
Actual	293;288;299	62;65;65

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 11/37

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	14	Item	280
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
P0JS1900A17658	280	P1653697	0001225798

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.638	0.205	0.013	0.024

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	313;318;302	50;49;47
Required	Hardness test after Termical Tr		
Actual	Min. 179 258;258;258		

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 12/37

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1740 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=75mm

raccortubi Heat num. or Pcs. marking: 125796 - Qty:140,00

Protocol: CTCERC202400007059 * CERTIFICATE COPY
* Issued 24-07-2024

Pressbolt s.r.l. con unico socio
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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	15	Item	290
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0060 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
091205	30	P1679680	0001225799

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.410	0.762	0.222	0.011	0.026	1.054	0.177	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	Min 14	min 50
Actual	1060.6	849.9	20.9	56.8

	Hardness "HB"
Required	max 321
Actual	319;320;317

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 13/37

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	15	Item	300
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	60	P1610274	0001225800

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.45	0.70	0.23	0.012	0.022

	Proof Load	Hardness "HB"	HB after H.T. 24h
Required	Positive	max 327	Min. 179
Actual	Positive	295;301;296	258;292;299

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 14/37

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1750 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=60mm

raccortubi Heat num. or Pcs. marking: 091205 - Qty:30,00

Protocol: CTCERC202400007059 * CERTIFICATE COPY
* Issued 24-07-2024

PRESSBOLT

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	16	Item	310
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 3/4"-10 UNCX0130 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
297755	60	P1679697	0001225801

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.409	0.824	0.283	0.009	0.003	1.022	0.205	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	Min 14	min 50
Actual	990	795	21.4	56.2

	Hardness "HB"	Impact Test +20 C "J"
Required	max 321	min med 27 J
Actual	295;295;295	57;68;56

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1760 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=130mm

raccortubi Heat num. or Pcs. marking: 297755 - Qty:60,00

Protocol: CTCERC202400007059 * CERTIFICATE COPY
* Issued 24-07-2024

Pressbolt s.r.l. con unico socio
Partita Iva 03231770136
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email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	16	Item	320
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 3/4"-10 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
559914	120	P1641375	0001225802

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.730	0.190	0.011	0.005

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	304;291;284	47;47;42
Required	Hardness test after Termical Tr		
Actual	Min. 179 243;258;241		

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 16/37

PRESSBOLT

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20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	17	Item	330
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 7/8"-9 UNCX0135 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
78606	40	P1679700	0001225803

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.43	0.76	0.27	0.018	0.028	0.99	0.2	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	947	845	18.2	59

	Elongation % 4D
Required	Min 14
Actual	16

	Hardness "HB"	Impact Test T Room "J"
Required	max 321	min med 27 J
Actual	292;292;292	65;68;67

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 000003167558 Rev. 000 of 22 July 2024 - Page 17/37

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1770 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-" L=135mm

raccortubi Heat num. or Pcs. marking: 78606 - Qty:40,00

Protocol: CTCERC202400007059 * CERTIFIED TRUE COPY
* Issued 24-07-2024

PRESSBOLT

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Messrs. RACCORTUBI S.p.A.
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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	17	Item	340
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 7/8"-9 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
22982	80	P1578935	0001225804

Chemical Analysis "%"

	C	Mn	Si	P	S	
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05	
Actual	0.450	0.720	0.230	0.012	0.025	

	Proof Load	Hardness "HB"	HB after H.T. 24h
Required	Positive	max 327	Min. 179
Actual	Positive	285;292;306	301;299;304

	Impact Test +20 C "J"
Required	Min med 27J
Actual	43;48;46

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 18/37

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1770 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-" L=135mm

raccortubi Heat num. or Pcs. marking: 78606 - Qty:40,00

Protocol: CTCERC202400007059 * CERTIFIED TRUE COPY * Issued 24-07-2024

PRESSBOLT

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	19	Item	370
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 3/4"-10 UNCX0095 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
128623	80	P1679692	0001225805

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.410	0.870	0.200	0.013	0.003	1.060	0.210	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1036.5	848.5	20	58.3

	Elongation % 4D
Required	Min 14
Actual	17.6

	Hardness "HB"	Impact Test T Room "J"
Required	max 321	min med 27 J
Actual	312;310;315	66;69;63

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 19/37

Pressbolt s.r.l. con unico socio
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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	19	Item	380
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 3/4"-10 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
559914	160	P1641375	0001225806

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.730	0.190	0.011	0.005

	Proof Load	Hardness "HB"	Impact Test +20 C "J"
Required	Positive	max 327	Min med 27J
Actual	Positive	304;291;284	47;47;42
Required	Hardness test after Termical Tr		
Actual	Min. 179 243;258;241		

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 20/37

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1790 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=95mm

raccortubi Heat num. or Pcs. marking: 128623 - Qty:80,00

Protocol: CTCERC202400007059 * CERTIFIED TRUE COPY
* Issued 24-07-2024

Pressbolt s.r.l. con unico socio
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Messrs. RACCORTUBI S.p.A.
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20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	20	Item	390
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

PED 2014/68/EU A% according to 5.65 SQR (Speciment Area)

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0065 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
111462	60	P1679681	0001225807

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.42	0.79	0.23	0.01	0.025	1.05	0.17	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	Min 14	min 50
Actual	1049.7	977.6	22.2	56.5

	Hardness "HB"
Required	max 321
Actual	315;315;315

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 23/37

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1800 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=65mm

raccortubi Heat num. or Pcs. marking: 111462 - Qty:60,00

Protocol: CTCERC202400007059 * CERTIFIED TRUE COPY
* Issued 24-07-2024

PRESSBOLT

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	20	Item	400
Job		Shipping ref.	3411829 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

PED 2014/68/EU

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	120	P1610274	0001225808

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.45	0.70	0.23	0.012	0.022

	Proof Load	Hardness "HB"	HB after H.T. 24h
Required	Positive	max 327	Min. 179
Actual	Positive	295;301;296	258;292;299

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

Manufacturer has a quality-assurance system with specific assessment for materials 2014/68/EU-Annex I-Sect.4.3 certified by TUV Rheinland for materials according to the directive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 24/37

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1800 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=65mm

raccortubi Heat num. or Pcs. marking: 111462 - Qty:60,00

Protocol: CTCERC202400007059 * CERTIFIED TRUE COPY
* Issued 24-07-2024

Pressbolt s.r.l. con unico socio
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email qualita@pressbolt.com

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VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167558	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005827 of 09 May 2024	Number	3402943
Reference			
Item	20	Item	410
Job		Shipping ref.	3411829 of 22 July 2024

Standard
UNI 6602-02 / ISO 7089-00 - HV100

Item Description	Heat Treatment
WASHER EN ISO 7089 100HV 12 HOT DIP GALVANIZED ASTM A153 / F2329	

Heat	Quantity	Lot	Job PB
21/74033	120	P1577912	0001225809

Chemical Analysis "%"

	C	Mn	P	S
Required	max 0.58 %	min 0.25 %	max 0.06 %	max 0.15 %
Actual	0.390	0.840	0.016	0.013

	Hardness "HB"
Required	100 - 200 HV
Actual	189;199;129

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Visual and dimensional Test	Positive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167558 Rev. 000 of 22 July 2024 - Page 25/37

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 1800 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=65mm

raccortubi Heat num. or Pcs. marking: 111462 - Qty:60,00

Protocol: CTCERC202400007059 * CERTIFIED TRUE COPY
* Issued 24-07-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724000839	123A90A	Q012400543

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 11/07/2024

Sonia Emiliani

☒ REVIEW

☐ WITNESS

CUSTOMER

NOTE

raccortubi

00006462

10/07/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				FLANGE SEC. ASTM A-182 F53 UNS S32750 DIMS SEC. ANSI B16.5	
820	NR	6	0,00	BLIND 3/4" S.150 RF	290706

raccortubi

00006462

10/07/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator
Colaulo Stefano

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
			FLANGE SEC. ASTM A-182 F53 UNS S32750 DIMS SEC. ANSI B16.5	
820	6	NR	BLIND 3/4" S.150 RF	290706

officine ambrogio melesi

23813 Cortenova (Lecco)
ITALY
Largo De Vecchi 11
P.o. box 11
Tel. 0341.98341
Fax 0341.983486 - 983497

FLANGE E FORGIATI

CERTIFICATO DI COLLAUDO
INSPECTION CERTIFICATE
CERTIFICAT D'ESSAIS

N.	DATA / *DATE*	SHEET /
193228	02/07/24	1/1

EN 10204/3.1

ORDINE / *ORDER / C.DE*: 00005848

DATA / *DATE*	COMMESSA
14/05/24	76668

RACCORTUBI S.P.A.
VIA S.PIETRO ALL'ORTO, 9
20121 MILANO MI

N. RIF.	ITEM	N / *QUANTITY*	DESCRIZIONE / *DESCRIPTION / DÉSIGNATION*	NOTE
SJ541	1-820	6	A182F53 3/4" BL 150 RF	125-250AARH A2532

N.	MATERIALE / *MATERIAL / MATÉRIEL*	HEAT / *COULÉE*	ACCIAIERIA / *STEEL PLANT / ACIÉRIE*	ORIGIN. CERT. / *CERT. D'ORIGIN*
SJ541	ASTM A182 F53	290706	ACCIAIERIE VALBRUNA	MEST035775

N. RIF. — ANALISI CHIMICA / *CHEMICAL ANALYSIS / COMPOSITION CHIMIQUE*

	C	Mn	Si	P	S	Cr	Ni	Mo	N	Cu				PRE
Min						24,000	6,000	3,000	0,240					40,000
Max	0,030	1,200	0,800	0,035	0,020	26,000	8,000	5,000	0,320	0,500				48,000
SJ541Ladle	0,020	0,730	0,460	0,025	0,001	25,740	6,100	3,560	0,280	0,280				41,968
SJ541Check	0,020	0,739	0,466	0,025	0,001	25,780	6,140	3,600	0,280	0,284				42,140

N. RIF. — PROVE MECCANICHE / *MECHANICAL TESTS / ESSAIS MECANIQUES*

	ø mm.	SO mm.2	LU mm.	RS.-YIELD *LIMITE* MPA	R.-TENSILE *RUPTURE* MPA	A. %-ELONG. *ALLONGEM.*	C. %-REDUCT. *STRICTION*	RESILIENZA / *IMPACT TEST / RESILIENCE* MEDIO / *AVERAGE MOYEN* Joule		MINIMO *MINIMUM* Joule		TIPO *TYPE*	TEMP. °C	*HARDNESS / DURETÉ* H R C
				550,00	750,00	25,00		45		35				Max 32
A2532TRAN	12,50	122,65	50,00	582,00	837,00	42,98	66,73	162	169	176		KV	- 50	22/23
LONG	12,50	122,65	50,00					165	172	184		KV	- 50	

N. RIF. — TRATTAMENTI TERMICI / *HEAT TREATMENTS / TRAITEMENTS THERMIQUES*

SJ541: Solubilizzazione/Solution annealed at 1120° C for min 1/2 h/inch quenched water

EN 10204/3.1
Products supplied are in conformance with the requirements of the order
Surface and dimensional check according to ASME B16.5 2020.
Steel made by electric furnace.
Mechanical tests according to ASTM A370
Test specimen orientation: transversal and longitudinal.
Impact test specimen size 10 x 10 x 55 mm
Corrosion test acc. to ASTM G48 method "A" at 50°C / 24 hours, no weight loss,no pitiing at 20x
Ferrite determined using ferritoscope fisher MP30 on all pieces, results: 35-60% on total body.
water temperature before quenching<40°C water temperature after quenching<50°C
P.M.I. test performed on 100% of pieces with satisfactory results.
Material acc. to QTR 04 R7; Norsok M630 2020, MDS D54 Rev.6; MDS DH54 Rev.1 as applicable
Material acc. to IOGP S-563:2021, MDS ID254/ID254S Rev.02 as applicable
The works operate a quality management system acc. to annex I, section 4.3 of the pressure equipment directive (PED) 2014/68/EU certificate by TUV certificate nr 58/2002/MUC.

ESITO DELLE PROVE / *TEST ISSUE / RESULTS DES ESSAIS:* FAVOREVOLE SATISFACTORY SATISFAISANT

TRADE MARK	P. OFF. A. MELESI & C.	COLLAUDATORE / *INSPECTOR / INSPECTEUR*	ENTE COLLAUDATORE / *INSPECTION AGENCY AUTHORITÉE DE RECETTE*
	Electronically Generated Certificate	Monica Vanini	

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 820 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: BLIND 3/4" S.150 RF

raccortubi Heat num. or Pos. marking: 290706 - Qty:6,00

Protocol: CTCERC202400006462 * CERTIFIED TRUE COPY
* Issued 10-07-2024

officine ambrogio melesi

23813 Cortenova (Lecco)
ITALY
Largo De Vecchi, 11
P.o. box 11
Tel 0341 98.341 rie.aut.
Fax 0341 90.15.06 - 90.14.88
FLANGE E FORGIATI

CERTIFICATO CONTROLLO CON LIQUIDI PENETRANTI
LIQUID PENETRANT TEST

Nr.	Data / Date	Pag / Sheet	Commessa / Job
25575	02/07/24	1 / 1	76668

Ordine / Order	Cliente / Customer
00005848	1031 RACCORTUBI S.P.A.

Specifica / Specification	Criteri di accettazione / Acceptance criteria
ASME BPVC, Section V, Article 5	ASME VIII Div.1, Appendix 8
Procedura / Procedure	**Stadio di controllo / Inspection phase**
PT 01 - Rev. 1 Ed. 2	After final h.t. machined before drilling

Pos Item	Q.tà Quantity	Descrizione Description	Colata Heat	Cond. Superficiali Surface status
1-820	6	A182F53 3/4" BL 150 RF 125-250AARH	290706	FINITO/FINISHED

TECNICA D'ESAME / EXAMINATION TECHNIQUE

- [ ] Fluorescente / Fluorescent
- [X] Contrasto colore / Color constract
- [ ]
- [X] Lavabile con acqua / Water washable
- [ ] Rimovibile con solvente / Solvent removable
- [ ]

FASI / STEPS	PRODOTTI / PRODUCTS - TIPO / TYPE FABBRICANTE / MANUFACTURER	LOTTO N. / BATCH NR.
Pulizia / Cleaning	Solvente/Cleaner CGM (R2 60 velnet solnet)	
Applicazione penetrante / Penetrant application	CGM (R2.71 RED "WW")	24/010
Rimozione eccesso penetrante / Excess penetrant removal	Acqua/Water Pressione/Pressure <275 kPa (40psi) Temperatura/Temperature <40°C	
Asciugatura / Drying	Asciugatura con stracci / Wiping	
Applicazione rilevatore / Developer application	CGM (R.82 ROTRIVEL "U" / white)	24/029

TECNICA D'ESAME / EXAMINATION TECHNIQUE

Tempo di penetrazione / Penetrant dwell time	20 min
Tempo di sviluppo / Developer dwell time	12 min

ATTREZZATURA DI ILLUMINAZIONE / LIGHTING EQUIPMENT

Beta 1838SW Lamp

NOTE / NOTES

No defects
Examination performed on 100% of pieces

RISULTATI / RESULTS

Conforme

FIRME / SIGNATURES

OPERATORI / OPERATORS

LOCATELLI DARIO Lev. II

ENTE COLLAUDATORE / INSPECTION AUTHORITIES | **ISPETTORE CLIENTE / CUSTOMER INSPECTOR**

officine ambrogio melesi
23813 Cortenova (Lecco) ITALY
Largo De Vecchi 11
P.o. box 11
Tel. 0341.98341
Fax 0341.983498 - 983497

DATA / *DATE* 02/07/2024		CERTIFICATO N° *REPORT N°* 1417/2024	
		MATERIALE *MATERIAL*	ASTM A182 F53
COLATA *HEAT N°*	290706	LOTTO *LOT*	A2532

ESAME MICROSCOPICO / *MICROSCOPIC EXAMINATION*

Informazioni generali *General info*	
Descrizione prova *Test description*	Esame microscopico *Microscopic examination*
Standard di prova *Test standard*	ASTM E3-11 (2017) + ASTM E407-23
Strumentazione *Equipment*	Metallographic microscope Leica DMI8 M (OAM n°1631)

Parametri di prova *Test parameters*

Ingrandimento *Magnification*	500X	**Attacco** *Etching*	20% NaOH elettrolitico *electrolytic*
Posizione di Prelievo *Sample Position*	Intero spessore *Full Thickness*		

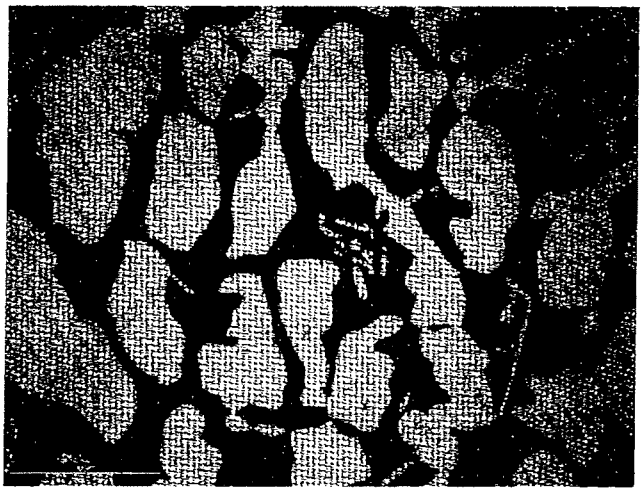


Immagine non in scale / *Image not in scale*

Note / *Remarks*
L'analisi metallografica mostra una struttura regolare libera da fasi intermetalliche e precipitati
The results of metallographic examination show a regular structure free from intermetallic phases and precipitates

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 820 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: BLIND 3/4" S.150 RF

raccortubi Heat num. or Pcs. marking: 290706 - Qty:6,00

Protocol: CTCERC202400006462 * CERTIFIED TRUE COPY
* Issued 10-07-2024
176/996

officine ambrogio
melesi
23813 Cortenova (Lecco)
ITALY
Largo De Vecchi 11
P.o. box 11
Tel. 0341.98341
Fax 0341.983498 - 983497

DATA / *DATE* 02/07/2024		CERTIFICATO N° *REPORT N°*	1417/2024
MATERIALE *MATERIAL*	ASTM A182 F53		
COLATA *HEAT N°*	290706	LOTTO *LOT*	A2532

CONTENUTO PERCENTUALE DI UNA FASE CON METODO DELL'ANALISI DI IMMAGINE

DETERMINING THE INCLUSION OR SECOND-PHASE COSTITUENT CONTENT BY AUTOMATIC IMAGE ANALYSIS

Informazioni generali *General Info*	
Descrizione prova *Test description*	Contenuto percentuale di una fase con met. dell'analisi di immagine *Determining the inclusion or second phase costituent content by automatic image analysis*
Standard di prova *Test standard*	ASTM E1245-03(2023)
Strumentazione *Equipment*	Metallographic microscope Leica DMi8 M (OAM n°1631)

Caratteristiche provino *Specimen information*			
Preparazione della superficie *Surface preparation*	Lucidatura 1µm *1µm polishing*	**Attacco** *Etching*	20% NaOH elettrolitico *electrolytic*

Parametri di prova *Test parameters*			
Posizione di Prelievo *Sample Position*	Intero spessore *Full Thickness*	**Ingrandimento** *Magnification*	200X
N° campi X N° sezioni *Nr fields X Nr sections*	30 campi X 1 sezione *30 fields X 1 section*		

Risultati *Results*	
Vv :% Frazione di volume della ferrite ± 95% C.I. [%] % Volume fraction of the constituent ± 95% C.L.	49,30 ± 1,96

Valore Richiesto *Required Value*			
Vv% Minimo [%] *Minimum*	35	**Vv% Massimo [%]** *Maximum*	55

Note / *Remarks*

Valore Richiesto : Indicato nell'ordine cliente o nei documenti di riferimento / *Required Value: Indicated in the order or reference documents*

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 820 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: BLIND 3/4" S.150 RF

raccortubi Heat num. or Pcs. marking: 290706 - Qty:6,00

Protocol: CTCERC202400006462 * CERTIFIED TRUE COPY
* Issued 10-07-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724000839	123A90A	Q012400393

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

06.06.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi

00004301

30/05/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				TUBI ELETTROUNITI SEC. ASME/ASTM SA/A-312 TP.316/316L, DIM. SEC. ANSI B36.19	
100	M	36,00	6,00	273.00x4.19 WELDED - RX 100%	VCC062015

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

raccortubi

00004301

27/05/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
100	36,00	M	TUBI ELETTROUNITI SEC. ASME/ASTM SA/A-312 TP.316/316L, DIM. SEC. ANSI B36.19 273.00x4.19 WELDED - RX 100%	VCC062015

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: VCC062015 - Qty:36.00
Customer: ROSETTI MARINO S.p.A.
Description: 273.00X4.19 WELDED - RX 100%
Order: 1724000839 - 22.04.24 - Item n.: 100 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC2024000004301 * CERTIFIED TRUE COPY * Issued 22-05-2024
CTCERT2023000021771

YC INOX CO., LTD.

INSPECTION CERTIFICATE
EN 10204-3.1:2004

No.270,Sec.4,Jungshan Rd.,Shijou Shiang,
Chang-Hwa,Taiwan,R.O.C
http://www.ycinox.com
TELo +886-4-8899666 FAXo +886-4-8899770

Customer	RACCORTUBI S.P.A			Customer No.	FIT016	Certificate No.	230320P0077
Product	STAINLESS STEEL WELDED PIPE			Commercial Invoice No.	J23020120	Date of Issue	2023/03/20
Specification	ASTM A312/A312M-22			PO No.	00000192 S	Order No.	EP22050134-5
Steel Grade	TP316/316L	Finish	PICKLED	P.I.No.	PI 2205-087	Weight No.	C23030200

Item No.	Heat No.	Product Description		Chemical Composition(%)								Tension Test			*01	*02	*03	*04	Coil No
		Dimension	Quantity Pcs	C	Si	Mn	P	S	Ni	Cr	Mo	0.2% Y.S.	T.S.	E.L.	HR	HT	HY	F1	
				$X10^{-3}$	$X10^{-2}$	$X10^{-2}$	$X10^{-3}$	$X10^{-3}$	$X10^{-2}$	$X10^{-2}$	$X10^{-2}$	MPa		%	HRB	%	MPa		
Specification			Min.						1000	1600	200	205	515	35		1040			
			Max.	35	100	200	45	30	1400	1800	300								
1	VCC062015	10"(273.1mm) x SCH-10S(4.19mm) x 6M	67	22	44	136	28	2	1005	1676	202	309	636	57	83	1060	3.5	OK	N2112140216
		TOTAL:	67																

Remark

*STANDARDS:ASTM A312/ASME SA312 (2021 Section II Part A)
*Weld Factor = 0.8 (Acc. to ASME B31.3 Table 302.3.4)
*QM-System for Material Manufacturer according to PED 2014/68/EU Annex 1 par 4.3

Note

100% Alloy Verification(PMI)o OK
Intergranular Corrosion Test (according to ASTM A262 Practice E)o OK
Hardness according to NACE MR0175 / ISO 15156-3:2015 : Satisfactory.
Hardness according to NACE MR0103 / ISO 17945:2015 : Satisfactory.
Visual Inspection(Surface) and Dimension Checko OK

*01= Hardness Test
*02= Heat Treatment(W.Q.)
*03= Hydrostatic Test
*04= Flattening Test
*Gauge Length: 50mm

1MPa=1N/mm^2=10bar=145psi=10.2kgf/cm^2

Surveyor By			Manager of Quality Assurance Department
N/A	We hereby certify that material described herein has been manufactured and tested with satisfactory results in accordance with the requirement of the above material specification. The material described above has been found free of radiation by raw material supplier.	1.ISO 9001:2015 (No.01 100 056299) 2.PED / AD2000 (No.01 202 TWN/Q-05 0105) 3.ISO 3834 (No.01 240 TWN/A-15 0104) 4.ISO 45001:2018 (No.01 113 822 096385) 5.ISO 50001:2018 (No.01 407 096385)	Pipper Chiu

YC-2Q007-01D

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

SIDERTEST
mechanical chemical non destructive tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant A: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

RT 1006 / 24

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Tipo di controllo/ Type of control ***Esame radiografico mediante raggi X o raggi Gamma/ Radiographic Testing by means of X-ray or gamma-ray***

Cliente/ Customer	Subcliente/ Subcustomer	Commessa/ Job	Ordine/ Order
Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00002010**	**1724000839**

Prova Nr./ Test Nr.	Posizione/ Item	Qta/ Qty	Colata/ Heat	Materiale/ Material	Descrizione/ Description
425	**100**	**Mt. 36,00**	**VCC062015**	**ASTM A 312 TP316/316L**	**PIPE Ø 273,00 mm W.T. 4,19 mm**

Doc. Cliente/ Client's doc.	*Doc. Sider Test/ Sider Test doc.*	*Norma Esecuzione/ Execution Standard*	*Accettabilità/ Acceptance Std*
	PO 04-005 RT Rev. 22 - IL 04-005-001 RT Rev. 08	**ASME BPVC.V-2023 Art. 2**	**ASME BPVC.VIII.1-2023 UW-51**

Area Esame/ Area Tested **100% Sald. e Z.T.A./ 100% Weld and HAZ** Superficie/ Surface **Come Saldato/ As Welded** Marcatura/ Marking **Stamping**

Tecnica/ Technique: Direzionale - Parete Doppia - Immagine singola - F/ Directional - Double wall - Single wall viewing

Raggi X/ X-Ray Classe EN/ EN Class Strumento/ Equipment **115/RT - MHF 300-D (Gilardoni Spa)** Macchina Focale/ Focal spot (mm) **3**

Parametri/ Details

Spessore/ Thickness (mm) **4.19** Sovrametallo/ Weld Reinforcement (mm) **1** Energia/ Energy **270 kV 3 mA** Tempo di esposizione/ Exposure time **1'**

Distanze/ Distances

Distanza sorgente-oggetto lato sorgente/ Source to source-side-object distance (mm) **1000** Distanza oggetto lato sorgente-film/ Source-side-object to film distance (mm) **5,19**

Films/ IQI

Sviluppo/ Film developing	**Automatico/ Automatic**	Tipo film/ Film type	**KODAK MX125**	Posizione penetrametro/ IQI location	**Lato film/ Film side**
Schermo anteriore/ Front screen	**0,05**	Formato pellicola/ Film size	**100 x 480**	Densità richiesta/ Required density	**1,8 ÷ 4**
Schermo posteriore/ Back screen	**0,1**	N° Film per busta/ Nr of films for case	**1**	Filo richiesto/ Required wire	**No. 4 (3°) - 0,0063 Inches**
				IQI	**ASTM 1A**

Ug: Effetto Penombra/ Geometric unsharpness **0,02 OK**

Tabella di discontinuità/ Table of discontinuites

***) Da marker iniziale/ From starting marker**

A - Inclusioni gassose/ Gas bubbles C - Tarli/ Wormholes E - Inclusioni allineat/ Slang lines G - Mancanza di penetrazione/ Lack of penetration I - Incisione/ Undercutting M - Difetto film/ Processing defect

B - Porosità/ Porosity D - Inclusioni di scoria/ Slang inclusions F - Mancanza di fusione/ Lack of fusion H - Cricca/ Crack L - Cordone irregolare/ Erratic weld bead N - Tungsteno/ Wolfarm

R - Riparazione/ Repair

Regola decisionale adottata per l'uso dell'incertezza di misura quando dichiara la conformità a un requisito specificato: per i controlli NDT il laboratorio monitora le sorgenti di incertezza, ma non la calcola. Non si riporta l'incertezza nel rapporto di prova. Il risultato può essere CONFORME o NON CONFORME/ Decision rule adopted for the use of measurement uncertainty when declaring compliance with a specified requirement: for NDT controls the laboratory monitors sources of uncertainty, but does not calculate it. The uncertainty is not reported in the test report. The result can be COMPLIANT or NON-COMPLIANT

Conforme a 'Accettabilità'/ Conforming to 'Acceptance Std'

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Accettabilità" riguarda solamente le prove presenti in questo rapporto di prova.Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti./ This test report refers only to the examined sample as received from the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client. Compliance with documents in "Acceptace Std" refers only to the tests described on this test report.Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.

Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Operatore CND Liv. II/ Lev. 2 NDE Operator	Data Ingresso Materiale/ Date of Material Arrival	Data esecuzione/ Date of Testing	Data Rapporto di prova/ Test Report Date	Cliente/ Customer	Ispettori/ Inspector	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
SIDER TEST S.r.l. SERGIO FABIO BARBATO LEVEL II SNT-TC-1A LEVEL II ISO 9712	**13/05/2024**	**20/05/2024**	**21/05/2024**	ROSETTI MARINO Supply Management Dept. ☐ Witness ☒ Review		PAOLO AMANI LEVEL 3 SNT-TC-1A - 10142RG-11 ISO 9712 NDT-IND-001119-C MT - PT - RT - UT

SIDERTEST
mechanical chemical non destructive tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant A: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

RT 1006 / 24

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Tipo di controllo/ Type of control ***Esame radiografico mediante raggi X o raggi Gamma/ Radiographic Testing by means of X-ray or gamma-ray***

Cliente/ Customer	Subcliente/ Subcustomer	Commessa/ Job	Ordine/ Order
Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00002010**	**1724000839**

Prova Nr./ Test Nr.	Posizione/ Item	Qta/ Qty	Colata/ Heat	Materiale/ Material	Descrizione/ Description
425	**100**	**Mt. 36,00**	**VCC062015**	**ASTM A 312 TP316/316L**	**PIPE Ø 273,00 mm W.T. 4,19 mm**

Film N°	Tipo di Saldatura/ Weld type	Saldatore/ Welder	Posizione Film/ Film location	Densita/ Density	Discontinuità/ Discontinuity (mm)			Filo/ Wire	NC
					Tipo/ Type	Lunghezza/ Length	Distanza/ Distance [1]		
59029			1-2	2,5		0	0	3	☐
59029			2-3	2,5		0	0	3	☐
59029			3-4	2,5	M	0	0	3	☐
59029			4-5	2,5		0	0	3	☐
59029			5-6	2,5		0	0	3	☐
59029			6-7	2,5		0	0	3	☐
59029			7-8	2,5		0	0	3	☐
59029			8-9	2,5		0	0	3	☐
59029			9-10	2,5		0	0	3	☐
59029			10-11	2,5		0	0	3	☐
59029			11-12	2,5		0	0	3	☐
59029			12-13	2,5		0	0	3	☐
59029			13-14	2,5		0	0	3	☐
59029			14-15	2,5		0	0	3	☐
59029			15-16	2,5		0	0	3	☐

Tabella di discontinuità/ Table of discontinuites

A - Inclusioni gassose/ Gas bubbles
B - Porosità/ Porosity
C - Tarli/ Wormholes
D - Inclusioni di scoria/ Slang inclusions
E - Inclusioni allineat/ Slang lines
F - Mancanza di fusione/ Lack of fusion
G - Mancanza di penetrazione/ Lack of penetration
H - Cricca/ Crack
I - Incisione/ Undercutting
L - Cordone irregolare/ Erratic weld bead
M - Difetto film/ Processing defect
N - Tungsteno/ Wolfarm
R - Riparazione/ Repair

[1]) Da marker iniziale/ From starting marker

Regola decisionale adottata per l'uso dell'incertezza di misura quando dichiara la conformità a un requisito specificato: per i controlli NDT il laboratorio monitora le sorgenti di incertezza, ma non la calcola. Non si riporta l'incertezza nel rapporto di prova. Il risultato può essere CONFORME o NON CONFORME/ Decision rule adopted for the use of measurement uncertainty when declaring compliance with a specified requirement: for NDT controls the laboratory monitors sources of uncertainty, but does not calculate it. The uncertainty is not reported in the test report. The result can be COMPLIANT or NON-COMPLIANT

Conforme a 'Accettabilità'/ Conforming to 'Acceptance Std'

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Operatore CND Liv. II/ Lev. 2 NDE Operator	Data Ingresso Materiale/ Date of Material Arrival	Data esecuzione/ Date of Testing	Data Rapporto di prova/ Test Report Date	Cliente/ Customer	Ispettori/ Inspector	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
SIDER TEST S.r.l. SERGIO FABIO BIMBATO LEVEL II SNT-TC-1A LEVEL II ISO 9712	13/05/2024	20/05/2024	21/05/2024	ROSETTI MARINO Supply Management Dept. Witness ☒ Review		PAOLO AMANI LEVEL 3 SNT-TC-1A 1016/RG-11 ISO 9712 N° IIS-PRD-001119-C RT - UT

SIDERTEST
mechanical chemical non destructive tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant A: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

RT 1006 / 24

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Tipo di controllo/ Type of control ***Esame radiografico mediante raggi X o raggi Gamma/ Radiographic Testing by means of X-ray or gamma-ray***

Cliente/ Customer	Subcliente/ Subcustomer	Commessa/ Job	Ordine/ Order
Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00002010**	**1724000839**

Prova Nr./ Test Nr.	Posizione/ Item	Qta/ Qty	Colata/ Heat	Materiale/ Material	Descrizione/ Description
425	**100**	**Mt. 36,00**	**VCC062015**	**ASTM A 312 TP316/316L**	**PIPE Ø 273,00 mm W.T. 4,19 mm**

Film N°	Tipo di Saldatura/ Weld type	Saldatore/ Welder	Posizione Film/ Film location	Densita/ Density	Discontinuità/ Discontinuity (mm)			Filo/ Wire	NC
					Tipo/ Type	Lunghezza/ Length	Distanza/ Distance [1]		
59029			16-17	2,5		0	0	3	☐
59030			1-2	2,6		0	0	3	☐
59030			2-3	2,6		0	0	3	☐
59030			3-4	2,6		0	0	3	☐
59030			4-5	2,6		0	0	3	☐
59030			5-6	2,6		0	0	3	☐
59030			6-7	2,6		0	0	3	☐
59030			7-8	2,6		0	0	3	☐
59030			8-9	2,6		0	0	3	☐
59030			9-10	2,6	M	0	0	3	☐
59030			10-11	2,6		0	0	3	☐
59030			11-12	2,6		0	0	3	☐
59030			12-13	2,6		0	0	3	☐
59030			13-14	2,6		0	0	3	☐
59030			14-15	2,6		0	0	3	☐

Tabella di discontinuità/ Table of discontinuites

[1]) Da marker iniziale/ From starting marker

A - Inclusioni gassose/ Gas bubbles
B - Porosità/ Porosity
C - Tarli/ Wormholes
D - Inclusioni di scoria/ Slang inclusions
E - Inclusioni allineat/ Slang lines
F - Mancanza di fusione/ Lack of fusion
G - Mancanza di penetrazione/ Lack of penetration
H - Cricca/ Crack
I - Incisione/ Undercutting
L - Cordone irregolare/ Erratic weld bead
M - Difetto film/ Processing defect
N - Tungsteno/ Wolfarm
R - Riparazione/ Repair

Conforme a 'Accettabilità'/ Conforming to 'Acceptance Std'

Regola decisionale adottata per l'uso dell'incertezza di misura quando dichiara la conformità a un requisito specificato: per i controlli NDT il laboratorio monitora le sorgenti di incertezza, ma non la calcola. Non si riporta l'incertezza nel rapporto di prova. Il risultato può essere CONFORME o NON CONFORME/ Decision rule adopted for the use of measurement uncertainty when declaring compliance with a specified requirement: for NDT controls the laboratory monitors sources of uncertainty, but does not calculate it. The uncertainty is not reported in the test report. The result can be COMPLIANT or NON-COMPLIANT

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Operatore CND Liv. II/ Lev. 2 NDE Operator	Data Ingresso Materiale/ Date of Material Arrival	Data esecuzione/ Date of Testing	Data Rapporto di prova/ Test Report Date	Cliente/ Customer	Ispettori/ Inspector	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
SIDER TEST S.r.l. SERGIO FABIO BIMBATO LEVEL II ISO 9712 LEVEL II SNT-TC-1A LEVEL II ISO 9712	**13/05/2024**	**20/05/2024**	**21/05/2024**	ROSETTI MARINO Supply Management Dept. ☐ Witness ☒ Review		PAOLO AMANI LEVEL 3 SNT-TC-1A - 16/RG 11 ISO 9712 NDT-PND-0111/C UT - PT - RT - MT

SIDERTEST
mechanical chemical non destructive tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant A: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

RT 1006 / 24

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Tipo di controllo/ Type of control ***Esame radiografico mediante raggi X o raggi Gamma/ Radiographic Testing by means of X-ray or gamma-ray***

Cliente/ Customer	Subcliente/ Subcustomer	Commessa/ Job	Ordine/ Order
Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00002010**	**1724000839**

Prova Nr./ Test Nr.	Posizione/ Item	Qta/ Qty	Colata/ Heat	Materiale/ Material	Descrizione/ Description
425	**100**	**Mt. 36,00**	**VCC062015**	**ASTM A 312 TP316/316L**	**PIPE Ø 273,00 mm W.T. 4,19 mm**

Film N°	Tipo di Saldatura/ Weld type	Saldatore/ Welder	Posizione Film/ Film location	Densita/ Density	Discontinuità/ Discontinuity (mm)			Filo/ Wire	NC
					Tipo/ Type	Lunghezza/ Length	Distanza/ Distance [1]		
59030			15-16	2,6		0	0	3	☐
59030			16-17	2,6		0	0	3	☐
59031			1-2	2,6		0	0	3	☐
59031			2-3	2,6		0	0	3	☐
59031			3-4	2,6		0	0	3	☐
59031			4-5	2,6		0	0	3	☐
59031			5-6	2,6		0	0	3	☐
59031			6-7	2,6		0	0	3	☐
59031			7-8	2,6		0	0	3	☐
59031			8-9	2,6		0	0	3	☐
59031			9-10	2,6		0	0	3	☐
59031			10-11	2,6		0	0	3	☐
59031			11-12	2,6		0	0	3	☐
59031			12-13	2,6		0	0	3	☐
59031			13-14	2,6		0	0	3	☐

Tabella di discontinuità/ Table of discontinuites

[1]) Da marker iniziale/ From starting marker

A - Inclusioni gassose/ Gas bubbles
B - Porosità/ Porosity
C - Tarli/ Wormholes
D - Inclusioni di scoria/ Slang inclusions
E - Inclusioni allineat/ Slang lines
F - Mancanza di fusione/ Lack of fusion
G - Mancanza di penetrazione/ Lack of penetration
H - Cricca/ Crack
I - Incisione/ Undercutting
L - Cordone irregolare/ Erratic weld bead
M - Difetto film/ Processing defect
N - Tungsteno/ Wolfarm
R - Riparazione/ Repair

Regola decisionale adottata per l'uso dell'incertezza di misura quando dichiara la conformità a un requisito specificato: per i controlli NDT il laboratorio monitora le sorgenti di incertezza, ma non la calcola. Non si riporta l'incertezza nel rapporto di prova. Il risultato può essere CONFORME o NON CONFORME/ Decision rule adopted for the use of measurement uncertainty when declaring compliance with a specified requirement: for NDT controls the laboratory monitors sources of uncertainty, but does not calculate it. The uncertainty is not reported in the test report. The result can be COMPLIANT or NON-COMPLIANT

Conforme a 'Accettabilità'/ Conforming to 'Acceptance Std'

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Operatore CND Liv. II/ Lev. 2 NDE Operator	Data Ingresso Materiale/ Date of Material Arrival	Data esecuzione/ Date of Testing	Data Rapporto di prova/ Test Report Date	Cliente/ Customer	Ispettori/ Inspector	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
SIDER TEST S.r.l. SERGIO FABIO BIVIATO LEVEL II SNT-TC-1A LEVEL II ISO 9712	**13/05/2024**	**20/05/2024**	**21/05/2024**	ROSETTI MARINO Supply Management Dept. ☐ Witness ☒ Review		PAOLO AMANI LEVEL 3 SNT-TC-1A - 10152/RG 11 ISO 9712 NDE-PND-0011192-C UT - PT - RT - MT

SIDERTEST
mechanical chemical non destructive tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant A: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

RT 1006 / 24

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Tipo di controllo/ Type of control ***Esame radiografico mediante raggi X o raggi Gamma/ Radiographic Testing by means of X-ray or gamma-ray***

Cliente/ Customer	Subcliente/ Subcustomer	Commessa/ Job	Ordine/ Order
Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00002010**	**1724000839**

Prova Nr./ Test Nr.	Posizione/ Item	Qta/ Qty	Colata/ Heat	Materiale/ Material	Descrizione/ Description
425	**100**	**Mt. 36,00**	**VCC062015**	**ASTM A 312 TP316/316L**	**PIPE Ø 273,00 mm W.T. 4,19 mm**

Film N°	Tipo di Saldatura/ Weld type	Saldatore/ Welder	Posizione Film/ Film location	Densita/ Density	Discontinuità/ Discontinuity (mm)			Filo/ Wire	NC
					Tipo/ Type	Lunghezza/ Length	Distanza/ Distance [1]		
59031			14-15	2,6		0	0	3	☐
59031			15-16	2,6		0	0	3	☐
59031			16-17	2,6		0	0	3	☐
59032			1-2	2,3		0	0	3	☐
59032			2-3	2,3		0	0	3	☐
59032			3-4	2,3		0	0	3	☐
59032			4-5	2,3		0	0	3	☐
59032			5-6	2,3		0	0	3	☐
59032			6-7	2,3		0	0	3	☐
59032			7-8	2,3		0	0	3	☐
59032			8-9	2,3		0	0	3	☐
59032			9-10	2,3		0	0	3	☐
59032			10-11	2,3		0	0	3	☐
59032			11-12	2,3		0	0	3	☐
59032			12-13	2,3		0	0	3	☐

Tabella di discontinuità/ Table of discontinuites

A - Inclusioni gassose/ Gas bubbles
B - Porosità/ Porosity
C - Tarli/ Wormholes
D - Inclusioni di scoria/ Slang inclusions
E - Inclusioni allineat/ Slang lines
F - Mancanza di fusione/ Lack of fusion
G - Mancanza di penetrazione/ Lack of penetration
H - Cricca/ Crack
I - Incisione/ Undercutting
L - Cordone irregolare/ Erratic weld bead
M - Difetto film/ Processing defect
N - Tungsteno/ Wolfarm
R - Riparazione/ Repair

[1]) Da marker iniziale/ From starting marker

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SIDER TEST S.r.l. SERGIO FABIO BARBATO LEVEL II SNT-TC-1A LEVEL II ISO 9712	**13/05/2024**	**20/05/2024**	**21/05/2024**	ROSETTI MARINO Supply Management Dept Witness		PAOLO MANI LEVEL 3 SNT-TC-1A - [illegible] ISO 9712 NDT-ENDO001119.C [illegible] - RT - PT

SIDERTEST
mechanical chemical non destructive tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant A: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

RT 1006 / 24

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Tipo di controllo/ Type of control ***Esame radiografico mediante raggi X o raggi Gamma/ Radiographic Testing by means of X-ray or gamma-ray***

Cliente/ Customer	Subcliente/ Subcustomer	Commessa/ Job	Ordine/ Order
Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00002010**	**1724000839**

Prova Nr./ Test Nr.	Posizione/ Item	Qta/ Qty	Colata/ Heat	Materiale/ Material	Descrizione/ Description
425	**100**	**Mt. 36,00**	**VCC062015**	**ASTM A 312 TP316/316L**	**PIPE Ø 273,00 mm W.T. 4,19 mm**

Film N°	Tipo di Saldatura/ Weld type	Saldatore/ Welder	Posizione Film/ Film location	Densita/ Density	Discontinuità/ Discontinuity (mm)			Filo/ Wire	NC
					Tipo/ Type	Lunghezza/ Length	Distanza/ Distance [1]		
59032			13-14	2,3		0	0	3	☐
59032			14-15	2,3		0	0	3	☐
59032			15-16	2,3		0	0	3	☐
59032			16-17	2,3		0	0	3	☐
59033			1-2	2,5		0	0	3	☐
59033			2-3	2,5		0	0	3	☐
59033			3-4	2,5		0	0	3	☐
59033			4-5	2,5		0	0	3	☐
59033			5-6	2,5		0	0	3	☐
59033			6-7	2,5		0	0	3	☐
59033			7-8	2,5		0	0	3	☐
59033			8-9	2,5		0	0	3	☐
59033			9-10	2,5		0	0	3	☐
59033			10-11	2,5		0	0	3	☐
59033			11-12	2,5		0	0	3	☐

Tabella di discontinuità/ Table of discontinuites

A - Inclusioni gassose/ Gas bubbles
B - Porosità/ Porosity
C - Tarli/ Wormholes
D - Inclusioni di scoria/ Slang inclusions
E - Inclusioni allineat/ Slang lines
F - Mancanza di fusione/ Lack of fusion
G - Mancanza di penetrazione/ Lack of penetration
H - Cricca/ Crack
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L - Cordone irregolare/ Erratic weld bead
M - Difetto film/ Processing defect
N - Tungsteno/ Wolfarm
R - Riparazione/ Repair

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Operatore CND Liv. II/ Lev. 2 NDE Operator	Data Ingresso Materiale/ Date of Material Arrival	Data esecuzione/ Date of Testing	Data Rapporto di prova/ Test Report Date	Cliente/ Customer	Ispettori/ Inspector	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
SIDER TEST S.r.l. SERGIO FABIO BUSSATO LEVEL II SNT-TC-1A LEVEL II ISO 9712	**13/05/2024**	**20/05/2024**	**21/05/2024**	ROSETTI MARINO Supply Management Dept		PAOLO AMANI LEVEL 3 SNT-TC-1A - 1016/SG 11 ISO 9712 NDT-PRD-001119-C UT - PT - RT - MT

SIDERTEST
mechanical chemical non destructive tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

RT 1006 / 24

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Tipo di controllo/ Type of control ***Esame radiografico mediante raggi X o raggi Gamma/ Radiographic Testing by means of X-ray or gamma-ray***

Cliente/ Customer	Subcliente/ Subcustomer	Commessa/ Job	Ordine/ Order
Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00002010**	**1724000839**

Prova Nr./ Test Nr.	Posizione/ Item	Qta/ Qty	Colata/ Heat	Materiale/ Material	Descrizione/ Description
425	**100**	**Mt. 36,00**	**VCC062015**	**ASTM A 312 TP316/316L**	**PIPE Ø 273,00 mm W.T. 4,19 mm**

Film N°	Tipo di Saldatura/ Weld type	Saldatore/ Welder	Posizione Film/ Film location	Densita/ Density	Discontinuità/ Discontinuity (mm)			Filo/ Wire	NC
					Tipo/ Type	Lunghezza/ Length	Distanza/ Distance [1]		
59033			12-13	2,5		0	0	3	☐
59033			13-14	2,5		0	0	3	☐
59033			14-15	2,5		0	0	3	☐
59033			15-16	2,5		0	0	3	☐
59033			16-17	2,5		0	0	3	☐
59034			1-2	2,6		0	0	3	☐
59034			2-3	2,6		0	0	3	☐
59034			3-4	2,6		0	0	3	☐
59034			4-5	2,6		0	0	3	☐
59034			5-6	2,6		0	0	3	☐
59034			6-7	2,6		0	0	3	☐
59034			7-8	2,6		0	0	3	☐
59034			8-9	2,6		0	0	3	☐
59034			9-10	2,6		0	0	3	☐
59034			10-11	2,6		0	0	3	☐

Tabella di discontinuità/ Table of discontinuites

A - Inclusioni gassose/ Gas bubbles
B - Porosità/ Porosity
C - Tarli/ Wormholes
D - Inclusioni di scoria/ Slang inclusions
E - Inclusioni allineat/ Slang lines
F - Mancanza di fusione/ Lack of fusion
G - Mancanza di penetrazione/ Lack of penetration
H - Cricca/ Crack
I - Incisione/ Undercutting
L - Cordone irregolare/ Erratic weld bead
M - Difetto film/ Processing defect
N - Tungsteno/ Wolfarm
R - Riparazione/ Repair

[1]) Da marker iniziale/ From starting marker

Conforme a 'Accettabilità'/ Conforming to 'Acceptance Std'

Regola decisionale adottata per l'uso dell'incertezza di misura quando dichiara la conformità a un requisito specificato: per i controlli NDT il laboratorio monitora le sorgenti di incertezza, ma non la calcola. Non si riporta l'incertezza nel rapporto di prova. Il risultato può essere CONFORME o NON CONFORME/ Decision rule adopted for the use of measurement uncertainty when declaring compliance with a specified requirement: for NDT controls the laboratory monitors sources of uncertainty, but does not calculate it. The uncertainty is not reported in the test report. The result can be COMPLIANT or NON-COMPLIANT

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Accettabilità" riguarda solamente le prove presenti in questo rapporto di prova.Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti./ This test report refers only to the examined sample as received from the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client. Compliance with documents in "Acceptance Std" refers only to the tests described on this test report.Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.

Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Operatore CND Liv. II/ Lev. 2 NDE Operator	Data Ingresso Materiale/ Date of Material Arrival	Data esecuzione/ Date of Testing	Data Rapporto di prova/ Test Report Date	Cliente/ Customer	Ispettori/ Inspector	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
SIDER TEST S.r.l. SERGIO FABIO BIVIBATO UNI EN ISO 9712 LEVEL II-ST-TC-IA LEVEL II ISO 9712	**13/05/2024**	**20/05/2024**	**21/05/2024**	ROSETTI MARINO Supply Management Dept. ☐ Witness ☑ Review		PAOLO AMANI LEVEL 3 SNT-TC-1A - 10126SG 11 ISO 9712 NDT-ENDO-001119-C MT - PT - RT - UT

SIDERTEST
mechanical chemical non destructive tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant A: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

RT 1006 / 24

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Tipo di controllo/ Type of control ***Esame radiografico mediante raggi X o raggi Gamma/ Radiographic Testing by means of X-ray or gamma-ray***

Cliente/ Customer	Subcliente/ Subcustomer	Commessa/ Job	Ordine/ Order
Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00002010**	**1724000839**

Prova Nr./ Test Nr.	Posizione/ Item	Qta/ Qty	Colata/ Heat	Materiale/ Material	Descrizione/ Description
425	**100**	**Mt. 36,00**	**VCC062015**	**ASTM A 312 TP316/316L**	**PIPE Ø 273,00 mm W.T. 4,19 mm**

Film N°	Tipo di Saldatura/ Weld type	Saldatore/ Welder	Posizione Film/ Film location	Densita/ Density	Discontinuità/ Discontinuity (mm)			Filo/ Wire	NC
					Tipo/ Type	Lunghezza/ Length	Distanza/ Distance [1]		
59034			11-12	2,6		0	0	3	☐
59034			12-13	2,6		0	0	3	☐
59034			13-14	2,6		0	0	3	☐
59034			14-15	2,6		0	0	3	☐
59034			15-16	2,6		0	0	3	☐
59034			16-17	2,6		0	0	3	☐

Tabella di discontinuità/ Table of discontinuites

A - Inclusioni gassose/ Gas bubbles
B - Porosità/ Porosity
C - Tarli/ Wormholes
D - Inclusioni di scoria/ Slang inclusions
E - Inclusioni allineat/ Slang lines
F - Mancanza di fusione/ Lack of fusion
G - Mancanza di penetrazione/ Lack of penetration
H - Cricca/ Crack
I - Incisione/ Undercutting
L - Cordone irregolare/ Erratic weld bead
M - Difetto film/ Processing defect
N - Tungsteno/ Wolfarm
R - Riparazione/ Repair

[1]) Da marker iniziale/ From starting marker

Regola decisionale adottata per l'uso dell'incertezza di misura quando dichiara la conformità a un requisito specificato: per i controlli NDT il laboratorio monitora le sorgenti di incertezza, ma non la calcola. Non si riporta l'incertezza nel rapporto di prova. Il risultato può essere CONFORME o NON CONFORME/ Decision rule adopted for the use of measurement uncertainty when declaring compliance with a specified requirement: for NDT controls the laboratory monitors sources of uncertainty, but does not calculate it. The uncertainty is not reported in the test report. The result can be COMPLIANT or NON-COMPLIANT

Conforme a 'Accettabilità'/ Conforming to 'Acceptance Std'

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Accettabilità" riguarda solamente le prove presenti in questo rapporto di prova.Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti./ This test report refers only to the examined sample as received from the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client. Compliance with documents in "Acceptace Std" refers only to the tests described on this test report.Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.

Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Operatore CND Liv. II/ Lev. 2 NDE Operator	Data Ingresso Materiale/ Date of Material Arrival	Data esecuzione/ Date of Testing	Data Rapporto di prova/ Test Report Date	Cliente/ Customer	Ispettori/ Inspector	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
SIDER TEST S.r.l. SERGIO FABIO BIANCHI LIVELLI SNT-TC-1A LEVEL II ISO 9712	**13/05/2024**	**20/05/2024**	**21/05/2024**	ROSETTI MARINO Supply Management Dept. ☐ Witness ☐ Review		PAOLO AMANI LEVEL 3 SNT-TC-1A - MT - PT ISO 9712

raccortubi

00004640

30/05/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				TUBI SMLS SEC. ASTM ASTM/ASME A/SA-790 S32760 DIMS. SEC. ANSI B36.19	
10	M	53,58	8,00	33.40x3.38 SEAMLESS	BC2877
20	M	6,68	1,00	114.30x3.05 SEAMLESS	59571
30	M	6,51	1,00	26.67x2.87 SEAMLESS	739859
				TUBI SMLS SECONDO ASTM/ASME A/SA-790 UNS S32750 DIMS. SEC. ANSI B36.19	
40	M	60,27	11,00	48.26x3.68 SEAMLESS	556787
				TUBI SMLS ASME/ASTM SA/A-312 TP.316/316L, DIM. SEC.ANSI B36.19	
50	M	306,00	51,00	33.40x3.38 SEAMLESS	235689
60	M	189,36	31,00	48.26x3.68 SEAMLESS	235415

raccortubi

00004640

30/05/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00002010

Ordine N. P.O. number: 1724000839 - 22.04.24

123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine

Mat.l type and spec.s: as per P.Order

Pos. *Item*	**U.M.**	**Q.ta'** *Q.ty*	**Tubi** *Tubes*	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
70	M	62,08	10,00	60.33x2.77 SEAMLESS	235632
80	M	76,23	11,00	114.30x3.05 SEAMLESS	NJ113
90	M	18,56	3,00	168.28x3.40 SEAMLESS	NJ112
110	M	5,98	1,00	21.34x2.77 SEAMLESS	CH-19563
120	M	6,88	1,00	26.67x2.87 SEAMLESS	A-6925

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi

00004640

27/05/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
			TUBI SMLS SEC. ASTM ASTM/ASME A/SA-790 S32760 DIMS. SEC. ANSI B36.19	
10	53,58	M	33.40x3.38 SEAMLESS	BC2877
20	6,68	M	114.30x3.05 SEAMLESS	59571
30	6,51	M	26.67x2.87 SEAMLESS	739859
			TUBI SMLS SECONDO ASTM/ASME A/SA-790 UNS S32750 DIMS. SEC. ANSI B36.19	
40	60,27	M	48.26x3.68 SEAMLESS	556787
			TUBI SMLS ASME/ASTM SA/A-312 TP.316/316L, DIM. SEC.ANSI B36.19	
50	306,00	M	33.40x3.38 SEAMLESS	235689
60	189,36	M	48.26x3.68 SEAMLESS	235415
70	62,08	M	60.33x2.77 SEAMLESS	235632
80	76,23	M	114.30x3.05 SEAMLESS	NJ113
90	18,56	M	168.28x3.40 SEAMLESS	192/996 NJ112

raccortubi

00004640

27/05/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator
Colaulo Stefano

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
110	5,98	M	21.34x2.77 SEAMLESS	CH-19563
120	6,88	M	26.67x2.87 SEAMLESS	A-6925

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

SCHOELLER BLECKMANN TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RECEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 751007 Page: 1 / 6	Rev:
Created on: Date: 26.02.2024	Modified on: 07.03.2024

SCHOELLER-BLECKMANN Edelstahlrohr GmbH
2630 Ternitz, Rohrstrasse 1
Austria

TL: +43 2630 316-810
FAX: +43 2630 316-894
E-MAIL: wolfgang.hecher@sber.co.at

CUSTOMER DESCRIPTION/DESCRIPCIÓN DEL CLIENTE/KUNDENBEZEICHNUNG/COMMETTANT

CLIENT SOLD TO/SOLICITANTE/AUFTRAGGEBER/COMMETTANT

TSS
TUBACEX SERVICE SOLUTIONS, S.A.U
POLIGONO INDUSTRIAL SARATXO
01470 AMURRIO
ESPAÑA

SOLD TO:RACCORTUBI S.P.A.
SOLD P.O. REF.:00000076 S
SOLD ORDER REF.:395624
COPY NUMBER: 002

CLIENT ORDER/PEDIDO CLIENTE/KUNDEN AUFTRAGSNUMMER/NO.DE COMMANDE: I010576
SALES ORDER/PEDIDO VENTAS/AUFTRAGSNUMMER/NO.DE COMMANDE D'USINE:

TÜV SÜD

Certified Management System acc. to ISO 9001, ISO 14001 and ISO 45001 by LRQA

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

SCHOELLER-BLECKMANN EDELSTAHLROHR GMBH
HR. W. HECHER
(WORKS INSPECTOR)

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order#s requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate. TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 10 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 33.40x3.38 SEAMLESS

raccortubi Heat num. or Pcs. marking: BC2877 - Qty:53,58

Protocol: CTCERC202400004640 * CERTIFIED COPY
* Issued 22-05-2024

SCHOELLER BLECKMANN
TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RECEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 751007 Page: 2 / 6	Rev:
Created on: Date: 26.02.2024	Modified on: 07.03.2024

MATERIAL:SEAML. STAINL. STEEL TUBES/PIPES/TUBOS INOXIDABLES SIN SOLDADURA/TUBES INOX SANS SOUDURE/NAHTLOSE EDELSTAHLROHRE
HEAT-TREATED, PICKLED / TRATADO, DECAPADO / HYPERTREMPE, DECAPE / WÄRMEBEHANDELT, GEBEIZT, PASSIVATED AS PER ASTM A380 / PASIVADO SEGUN ASTM A380 / PASSIVÉ (ASTM A380) / PASSIVIERT (ASTM A380)
GRADE / ACERO / GRADE / WERKSTOFF: 1.4501,S32760,
STANDARD / NORMA / STANDARD / LIEFERUNG NACH: EN 10297-2:2005
NORSOK M650
NORSOK M630:2020 MDS D51 REV.6
ASME SECT.II PART.A SA790/SA790M-2021 ED.
EN 10216-5:2021 TC2
ASTM A790/A790M-22
RTX_D51S REV.6
CHECK ANALYSIS
CORROSION TESTED ACC. TO ASTM A262 PRACTICE E
CORROSION TESTED ACC. TO ASTM A923 TEST METHOD C
CORROSION TESTED ACC. TO ASTM G48 TEST METHOD A
CORROSION TESTED ACC. TO EN ISO 3651-2 PRACTICE B
SHELL ES/247 REV.2 EXCEPT DPI (TABLE 1) AND SURFACE REQUIREMENTS (POINT 9.1)
QAD 68 REV.0
SHELL MESC SPE 74/014 FEBRUARY 2021 EXCEPT:
NO LIQUID PENETRANT TEST (POINT 14.12.1),
TENSILE TEST ONLY IN LONGITUDINAL DIRECTION.
ULTRASONIC TEST ONLY FOR LONGITUDINAL DEFECTS.
IMPACT TEST (if applicable): Lateral expansion 0.38 mm. minimum.
ANSI/NACE MR0103/ISO 17945:2015
ULTRASONIC TEST ACC. TO ASTM A999/A999M / ASTM E213
ANSI/NACE MR0175/ISO15156-3:2015
HYDROTEST
TOLERANCES / TOLERANCIAS / TOLERANCES / TOLERANZEN NACH: EN ISO 1127/03.2019 D3/T3
ASTM A999/A999M-18
ASME SECT.II PART.A SA999/SA999M-2021 ED.
RANDOM LENGTHS / LARGOS VARIABLES / LONGUEUR COURANTE / EINGEENGTE LÄNGE 6.000/7.000 MM
PLAIN ENDS / LISOS / EXTRÉMITÉ D'EQUERRE / GLATTE ENDEN,
DIMENSIONS/DIMENSIONES/DIMENSIONS/DIMENSIONS: 33,40 X 3,38 MM / 1" SCH 40S
COLD FINISHED/LAMINADOS EN FRIO/KALTGEFORMT/LAMINES A FROID

Sales Item Pos Ped. AuftrgPos Usine Pos	Client Item Pos Clnt Kunde Pos Com. Pos	Delivery No N° Entrega Lieferung Avis. d'exp	Lot No. N° lote Los Nr. Lot d'inspection	Heat No Colada Schmelze Coulée	Pieces Piezas Stück Pcs	Weight Peso Gewicht Poids	Tot Lgth Long. Tot Gesamtlänge Tolength	Un Lgth Long. Un Längentyp Long. Un
20		8170101417	295471	BC2877	24	409 KG	161,06 M	6000-7000 MM

CHEMICAL COMPOSITION (%)/COMPOSICIÓN QUÍMICA (%)/CHEMISCHE ZUSAMMENSETZUNG (%)/COMPOSITION CHIMIQUE(%)
*L: Ladle C:Products

*	Heat	Seq	C	Mn	Si	P	S	Ni	Cr	Mo	Al	Cu
L	BC2877	1	0,020	0,47	0,240	0,021	0,0010	7,49	25,12	3,58	0,008	0,55
C	BC2877	1	0,020	0,51	0,260	0,022	0,0010	7,45	25,24	3,71	0,021	0,56
C	BC2877	23	0,021	0,49	0,270	0,022	0,0010	7,44	25,08	3,60	0,020	0,59

TÜV SÜD

Certified Management System acc. to ISO 9001, ISO 14001 and ISO 45001 by LRQA

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order#s requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

SCHOELLER-BLECKMANN
EDELSTAHLROHR GMBH

HR. W. HECHER

(WORKS INSPECTOR)

TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate. TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 10 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 33.40x3.38 SEAMLESS

raccortubi Heat num. or Pcs. marking: BC2877 - Qty:53,58

Protocol: CTCERC202400004640 * CERTIFIED COPY * Issued 22-05-2024

SCHOELLER BLECKMANN
TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RECEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 751007 Page: 3 / 6	Rev:
Created on: Date: 26.02.2024	Modified on: 07.03.2024

CHEMICAL COMPOSITION (%)/COMPOSICIÓN QUÍMICA (%)/CHEMISCHE ZUSAMMENSETZUNG (%)/COMPOSITION CHIMIQUE(%)

*L: Ladle C:Products

*	Heat	Seq	C	Mn	Si	P	S	Ni	Cr	Mo	Al	Cu
C	BC2877	24	0,020	0,49	0,280	0,022	0,0010	7,35	25,02	3,60	0,019	0,59

*	Heat	Seq	Nb	W	Co	N	Pren	V
L	BC2877	1	0,006	0,510	0,130	0,2200	40,4540	
C	BC2877	1	0,009	0,600	0,130	0,2210	41,0200	0,070
C	BC2877	23	0,005	0,600	0,130	0,2230	40,5300	0,070
C	BC2877	24	0,006	0,600	0,130	0,2210	40,4400	0,070

HEAT TREATMENT/TRATAMIENTO TÉRMICO/WÄRMEBEHANDLUNG/TRAITEMENT THERMIQUE

HIPERTEMPLADOS A 1110 °C , 5 min , Agua
SOLUTION ANNEALED AT 1110 °C , 5 min , WATER
HYPERTREMPES 1110 °C , 5 min , L' EAU
LOESUNGSGEGLUEHT 1110 °C , 5 min , Wasser

TENSILE TEST/TEST DE TENSIÓN/ESSAI TRACTION/ZUGVERSUCH

Lot No	Sample	T	Rp0.2	Rp1.0	Rm	A2"	A5
		°C	*MPa*	*MPa*	*MPa*	*%*	*%*
Min		*20*	*550*	*640*	*800*	*25*	
Max		*20*					
295471	1	20	776	800	943	26	32
	2	20	753	792	948	27	33

HARDNESS TEST/TEST DE DUREZA/DUREE/HÄRTEPRÜFUNG

Lot No	Sample	HRC
Min		
Max		*32*
295471	1	24
	2	24

METALURGICAL TESTS/ENSAYOS METALÚRGICOS/
METALLURGISCHE PRÜFUNGEN/ESSAIS METALLURGIQUES

INTERGRANULAR CORROSION TEST ACC. TO ASTM A262 PRACT."E": SATISFACTORY
ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ASTM A262 PRACT.E:
SATISFACTORIO
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND
ASTM A262 PRACT.E: IN ORDNUNG
ESSAI DE CORR. INTERGR. SELON ASTM A262 PRACT.E: SATISFAISANT

INTERGRANULAR CORROSION TEST ACC.TO DIN EN ISO 3651-2 MET.B:
SATISFACTORY
ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ISO 3651-2 MET.B:
SATISFACTORIO
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND
ISO 3651-2 MET."B": IN ORDNUNG
ESSAI DE CORR. INTERGR. SELON ASTM ISO 3651-2 MET."B": SATISFAISANT

TÜV SÜD

Certified Management System acc. to ISO 9001, ISO 14001 and ISO 45001 by LRQA

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order#s requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

SCHOELLER-BLECKMANN EDELSTAHLROHR GMBH

HR. W. HECHER

(WORKS INSPECTOR)

TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate. TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 10 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 33.40x3.38 SEAMLESS

SCHOELLER BLECKMANN
TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RÉCEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 751007 Page: 4 / 6	Rev:
Created on: Date: 26.02.2024	Modified on: 07.03.2024

PITTING CORROSION TEST ACCORDING TO ASTM G48 METHOD A
TEST TEMPERATURE 50°C TEST DURATION: 24 HRS
NO SIGNS OF PITTING ARE PRESENT. WEIGHT LOSS: 0,0624 g/m2

CORROSION TEST ACC. TO ASTM A923 METHOD C (AT 50 °C DURING 24 H)
NO SIGNS OF PITTING ARE PRESENT. WEIGHT LOSS: : 0,6240 : MDD

ETCH TEST ACC. TO ASTM A923 METH.A: UNAFFECTED STRUCTURE

NON-DESTRUCTIVE TESTS/ENSAYOS NO DESTRUCTIVOS/
ZERSTÖRUNGSFREIE PRÜFUNGEN/ESSAIS NON DESTRUCTIFS

100% ULTRASONIC TEST ACC. TO ASTM A999/A999M / ASTM E213: SATISFACTORY
100% ENSAYO DE ULTRASONIDOS DE ACUERDO A ASTM A999/A999M / ASTM E213:
SATISFACTORIO
100% ULTRASCHALLPRÜFUNG NACH ASTM A999/A999M / ASTM E213: IN ORDNUNG
100% ESSAI D´ULTRASON D'ACCORD A ASTM A999/A999M / ASTM E213:
SATISFAISANTE

POSITIVE MATERIAL IDENTIFICATION TEST ON EACH TUBE/PIPE
BY "X-RAY-FLUORESCENCE-ANALYZER": SATISFACTORY
VERIFICACION DEL GRADO DE ACERO EN CADA TUBO MEDIANTE "ANALIZADOR DE
FLUORESCENCIA DE RAYOS X": SATISFACTORIO
VERWECHSLUNGSPRUEFUNG AN JEDEM ROHR MIT
"RÖNTGEN-FLUORESZENZ-ANALYSATOR": IN ORDNUNG
VERIFICATION DE LA NUANCE SUR CHAQUE TUBE PAR
"X-RAY-FLUORESCENCE-ANALYZER": SATISFAISANT

HYDROSTATIC PRESSURE TESTED AT 172 bar, 2500 PSI DURING 5 SEC
ON EACH TUBE/PIPE: SATISFACTORY
ENSAYO HIDROSTÁTICO A 172 bar, 2500 PSI DURANTE 5 SEC EN CADA TUBO:
SATISFACTORIO
WASSERDRUCKPRÜFUNG BEI 172 bar, 2500 PSI HALTEZEIT 5 SEC JE ROHR:
IN ORDNUNG
ESSAI DE PRESSION HYDROSTATIQUE À 172 bar, 2500 PSI PENDANT 5 SEC
SUR CHAQUE TUBE: SATISFAISANT

EDDY CURRENT TEST ACC. TO ASTM A999/E426 ON EACH TUBE: SATISFACTORY
100% ENSAYO DE CORRIENTES INDUCIDAS DE ACUERDO ASTM A999/E426:
SATISFACTORIO
WIRBELSTROMPRÜFUNG ENTSPR. ASTM A999/E426 JE ROHR: IN ORDNUNG
100% CONTROLE COURANTS FOUCAULT D'APRES ASTM A999/E426: BIEN

TECHNOLOGICAL TESTS/ENSAYOS TECNOLÓGICOS/
TECHNOLOGISCHE PRÜFUNGEN/TECHNOLOGICAL TESTS

TÜV SÜD

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Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 10 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 33.40x3.38 SEAMLESS

raccortubi Heat num. or Pcs. marking: BC2877 - Qty:53,58

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

SCHOELLER BLECKMANN
TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RÉCEPTION
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EN 10204:2004 / 3.1

Number: 751007 Page: 5 / 6	Rev:
Created on: Date: 26.02.2024	Modified on: 07.03.2024

FLARING TEST: SATISFACTORY
ABOCARDADO S.NORMA: SATISFACTORIO
AUFWEITVERSUCH: IN ORDNUNG
ESSAI D'EVASEMENT: SATISFAISANT

FLATTENING TEST: SATISFACTORY
APLASTADO S.NORMA: SATISFACTORIO
RINGFALTVERSUCH: IN ORDNUNG
ESSAI D'APLATISSEMENT: SATISFAISANT

THE TUBES/PIPES CONFORM ALSO TO
ANSI/NACE MR0103/ISO 17495:2015
ANSI/NACE MR0175/ISO15156-3:2015

QUALIFIED ACCORDING TO NORSOK M650 / QTR 005 / QTR 006
FOR COLD PILGERED/COLD DRAWN PRODUCTS

BESICHTIGUNG UND NACHMESSUNG: IN ORDNUNG
INSPECTION AND CHECKING OF DIMENSIONS: SATISFACTORY
INSPECTION ET CONTROL DES DIMENSIONS: SATISFAISANT

GEFÜGEKONTROLLE: SIEHE ANLIEGENDEN REPORT
FOR MICROGRAPHIC EXAMINATION SEE ENCLOSED REPORT

FOR HARDNESS RESULTS PLEASE SEE ENCLOSURE

DIE WERKSTOFFWERTE ENSPRECHEN PUNKT 7.5 DER DRUCKGERÄTERICHTLINIE 2014/68/EU, ANHANG 1, MIT EINER BRUCHDEHNUNG VON MINDESTENS 14 % IM ZUGVERSUCH UND EINER KERBSCHLAGARBEIT VON MINDESTENS 27 J AN EINER ISO-V-KERBSCHLAGPROBE BEI 20° C.

MATERIAL CHARACTERISTICS COMPLY WITH POINT 7.5 OF ANNEX I TO PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU BY HAVING AN ELONGATION AFTER RUPTURE AT TENSILE TEST NO LESS THAN 14 % AND A BENDING RUPTURE ENERGY AT IMPACT TEST NO LESS THAN 27 J AT 20°C.

MARKING/ETIQUETADO/KENNZEICHNUNG/MARKSTEXT

SCHOELLER BLECKMANN / TUBACEX GROUP - SBS 33,40 X 3,38 MM / 1" SCH 40S ASME SA790 ASTM A790 EN 10216-5 TC2 EN 10297-2 1.4501 S32760 CFD CDSMLS HEAT/ PMI-AV LOT NO/ MADE IN AUSTRIA T/A ZFP

REMARKS/OBSERVACIONES/ANMERKUNG/REMARQUES

MECHANICAL TESTS WERE PERFORMED IN LONGITUDINAL DIRECTION IF NOT OTHERWISE STATED.

TÜV SÜD

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SCHOELLER-BLECKMANN EDELSTAHLROHR GMBH

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Description: 33.40x3.38 SEAMLESS

SCHOELLER BLECKMANN
TUBACEX GROUP

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Number: 751007 Page: 6 / 6	Rev:
Created on: Date: 26.02.2024	Modified on: 07.03.2024

REMARKS/OBSERVACIONES/ANMERKUNG/REMARQUES

REALIZADOS TEST MECÁNICOS EN DIRECCIÓN LONGITUDINAL SI NO HAY OTRAS INSTRUCCIONES.

DIE MECHANISCHEN PRÜFUNGEN WURDEN, SOWEIT NICHT ANDERS ANGEGEBEN, IN LÄNGSRICHTUNG DURCHGEFÜHRT.

LES ESSAIS MÉCHANIQUES ONT ÉTÉ FAITS, SI PAS SPÉCIFIÉ, EN DIRECTION LONGITUDINALE.

NO WELD REPAIR HAS BEEN PERFORMED ON THE MATERIAL.

SIN REPARACION POR SOLDADURA

AM MATERIAL WURDE NICHT GESCHWEISST.

SANS RÉPARATION AVEC SOUDURE

MATERIAL MANUFACTURER APPROVED WITH CERTIFICATE NR. 245/2004/MUC BY TÜV SÜDDEUTSCHLAND (NOTIFIED BODY 0036)TO ISSUE CERTIFICATES OF SPECIFIC PRODUCT CONTROL IN ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU.

FABRICANTE DE MATERIALES APROBADO CON CERTIFICADO Nº 245/2004/MUC EMITIDOPOR TUV SUDDEUTSCHLAND (ORGANISMO NOTIFICADO 0036) PARA LA EMISION DE CERTIFICADOS ESPECIFICOS DE CONTROL DE PRODUCTO DE ACUERDO DE LA DIRECTIVA DE EQUIPOS A PRESION 2014/68/EU.

WERKSTOFFHERSTELLER MIT BERECHTIGUNG ZUR AUSSTELLUNG VON BESCHEINIGUNGEN ÜBER SPEZIFISCHE PRÜFUNGEN AN DEN WERKSTOFFEN IM GELTUNGSBEREICH DER ZERTIFIZIERUNG UND IN ÜBEREINSTINSTIMMUNG MIT DER DRUCKGERÄTERICHTLINIE 2014/68/EU UND DEN ZUGRUNDE LIEGENDEN SPEZIFIKATIONEN ENTSPR. ZERTIFIKAT NR. 245/2004/MUC DER BENANNTEN STELLE NR.0036, TÜV SÜDDEUTSCHLAND

PRODUCTEUR DU MATERIEL APPROUVE SOUS CERTIFICATION Nº 245/2004/MUC PAR TUV SUDDEUTSCHLAND (N.B. 0036) POUR EMISSION DES CERTIFICATS SPECIFIQUE DE CONTROLE DE PRODUIT SELON LA DIRECTIVE DES EQUIPES A PRESION 2014/68/EU.

MATERIAL IS FREE OF RADIOACTIVE CONTAMINATION
EL MATERIAL ESTA LIBRE DE CONTAMINACION POR RADIACIONES
MATERIAL IST FREI VON RADIOAKTIVITÄT
MATÉRIEL LIBRE DE POLUTION RADIOACTIVE

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

TÜV SÜD

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Order: 1724000839 - 22.04.24 - Item n.: 10 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 33.40x3.38 SEAMLESS

raccortubi Heat num. or Pcs. marking: BC2877 - Qty:53,58

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY * Issued 22-05-2024

SCHOELLER BLECKMANN EDELSTAHLROHR TUBACEX GROUP	Anlage zu **ABNAHMEPRÜFZEUGNIS** EN 10204 3.1 Annex to **INSPECTION CERTIFICATE** EN 10204 3.1	Zertifikat Nr. Certificate No. **751007**
		Rev.: 00
		Date: 07.03.2024

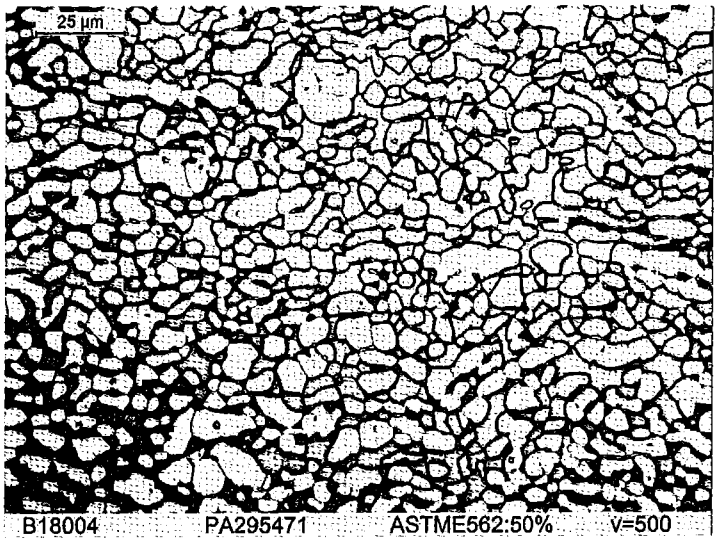
GEFÜGEKONTROLLE
MICROGRAPHIC EXAMINATION REPORT

WORK ORDER NO.: I010576 / 20

GEFÜGE: EINHEITLICHES GEFÜGE ÜBER DIE GANZE WANDDICKE, FREI VON KARBIDEN, NITRIDEN UND INTERMETALLISCHEN PHASEN.

MICROSTRUCTURE: UNIFORM STRUCTURE ACROSS FULL WALLTHICKNESS, FREE FROM CARBIDES, NITRIDES AND INTERMETALLIC PHASES.

FERRITGEHALT / FERRITE CONTENT TO ASTM E562: 50%



ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

SCHOELLER-BLECKMANN EDELSTAHLROHR GmbH
Rohrstraße 1
2630 Ternitz, AUSTRIA

TL.: +43 2630 316 601
FAX: +43 2630 316 894
E-MAIL: **qualitysber@sber.co.at**

Zeichen des Prüfers
Symbol of Inspector

Wolfgang Hecher
Der Werkssachverständige
Works Inspector

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 10 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 33.40x3.38 SEAMLESS

raccortubi Heat num. or Pcs. marking: BC2877 - Qty:53,58

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

TTI
TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RÉCEPTION
ABNAHMEPRUFZEUGNIS
EN 10204:2004 / 3.1

Number: 745216 Page: 1 / 7	Rev: 00
Created on: Date: 19.06.2023	Modified on: 29.06.2023

TTI - TUBACEX TUBOS INOXIDABLES

Registro Mercantil de Alava, Tomo 587, Folio 189, Hoja VI 2885 - N.I.F. A-01140227

Tres cruces, 8
01400 Llodio (Alava)
SPAIN

TL: 946721350
FAX: 946725062
E-MAIL:

CUSTOMER DESCRIPTION/DESCRIPCIÓN DEL CLIENTE/KUNDENBEZEICHNUNG/COMMETTANT

CLIENT SOLD TO/SOLICITANTE/AUFTRAGGEBER/COMMETTANT

TSS
TUBACEX SERVICE SOLUTIONS, S.A.U
POLIGONO INDUSTRIAL SARATXO
01470 AMURRIO

SOLD TO:RACCORTUBI S.P.A.
SOLD P.O. REF.:00000171 S
SOLD ORDER REF.:377154
COPY NUMBER: 001

CLIENT ORDER/PEDIDO CLIENTE/KUNDEN AUFTRAGSNUMMER/NO.DE COMMANDE: I010723

SALES ORDER/PEDIDO VENTAS/AUFTRAGSNUMMER/NO.DE COMMANDE D'USINE:

AENOR Empresa Registrada UNE EN ISO 9001

AENOR Gestión Ambiental UNE EN ISO 14001

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ROSETTI MARINO
Supply Management Dept.
☑ Witness ☑ Review

TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

Iñigo Arriola Alcibar

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Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 114.30x3.05 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59571 - Qty:6,68

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY * Issued 22-05-2024

TTI TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCION
CERTIFICAT DE RECEPTION
ABNAHMEPRUFZEUGNIS
EN 10204:2004 / 3.1

Number: 745216 Page: 2 / 7	Rev: 00
Created on: Date: 19.06.2023	Modified on: 29.06.2023

MATERIAL:SEAML. STAINL. STEEL TUBES/PIPES/TUBOS INOXIDABLES SIN SOLDADURA/TUBES INOX SANS SOUDURE/NAHTLOSE EDELSTAHLROHRE
HEAT-TREATED, PICKLED / TRATADO, DECAPADO / HYPERTREMPE, DECAPE / WÄRMEBEHANDELT, GEBEIZT, PASSIVATED AS PER ASTM A380 / PASIVADO SEGUN ASTM A380 / PASSIVÉ (ASTM A380) / PASSIVIERT (ASTM A380)
GRADE / ACERO / GRADE / WERKSTOFF: S32760,1.4501,
STANDARD / NORMA / STANDARD / LIEFERUNG NACH: ASME SECT.II PART.A SA790/SA790M-2021 ED.
ASTM A790/A790M-22
EN 10216-5:2021 TC2
EN 10297-2:2005
NORSOK M650 QTR N.2
NORSOK M630:2020 MDS D51 REV.6
CHECK ANALYSIS
CORROSION TESTED ACC. TO ASTM A262 PRACTICE E
CORROSION TESTED ACC. TO ASTM A923 TEST METHOD C
CORROSION TESTED ACC. TO ASTM G48 TEST METHOD A
CORROSION TESTED ACC. TO EN ISO 3651-2 PRACTICE B
SHELL ES/247 REV.2 EXCEPT DPI (TABLE 1) AND SURFACE REQUIREMENTS (POINT 9.1)
HYDROTEST
ANSI/NACE MR0103/ISO 17945:2015
ANSI/NACE MR0175/ISO15156-3:2015
QAD 68 REV.0
RTX_D51S REV.6
SHELL MESC SPE 74/014 FEBRUARY 2021 EXCEPT:
NO LIQUID PENETRANT TEST (POINT 14.12.1),
TENSILE TEST ONLY IN LONGITUDINAL DIRECTION.
ULTRASONIC TEST ONLY FOR LONGITUDINAL DEFECTS.
IMPACT TEST (if applicable): Lateral expansion 0.38 mm. minimum.
ULTRASONIC TEST ACC. TO ASTM A999/A999M / ASTM E213
TOLERANCES / TOLERANCIAS / TOLERANCES / TOLERANZEN NACH: ASME SECT.II PART.A SA999/SA999M-2021 ED.
ASTM A999/A999M-18
EN ISO 1127/03.2019 D3/T3
RANDOM LENGTHS / LARGOS VARIABLES / LONGUEUR COURANTE / EINGEENGTE LÄNGE 6.000/7.000 MM
PLAIN ENDS / LISOS / EXTRÉMITÉ D'EQUERRE / GLATTE ENDEN,
DIMENSIONS/DIMENSIONES/DIMENSIONS/DIMENSIONS: 114,3 X 3,05 MM - 4" SCH 10S
COLD FINISHED/LAMINADOS EN FRIO/KALTGEFORMT/LAMINES A FROID

Sales Item / Pos Ped. / AuftrgPos / Usine Pos	Client Item / Pos Clnt / Kunde Pos / Com. Pos	Delivery No / N° Entrega / Lieferung / Avis. d'exp	Lot No. / N° lote / Los Nr. / Lot d'inspection	Heat No / Colada / Schmelze / Coulée	Pieces / Piezas / Stück / Pcs	Weight / Peso / Gewicht / Poids	Tot Lgth / Long. Tot / Gesamtlänge / Tolength	Un Lgth / Long. Un / Längentyp / Long. Un
20		8110077700	P2302287	59571	12	696 KG	80,01 M	6000-7000 MM

RAW MATERIAL/DATOS MATERIAL/VORMATERIAL/MATIERE PREMIERE

Heat Nr:	Supplier	Method
59571	ACERALAVA (SPAIN)	Electric furnace+AOD

AENOR Empresa Registrada UNE EN ISO 9001

AENOR Gestión Ambiental UNE EN ISO 14001

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Description: 114.30x3.05 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59571 - Qty:6,68

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY * Issued 22-05-2024

TTI TUBACEX GROUP

INSPECTION CERTIFICATE, CERTIFICADO DE INSPECCIÓN CERTIFICAT DE RÉCEPTION ABNAHMEPRÜFZEUGNIS EN 10204:2004 / 3.1

Number: 745216 Page: 3 / 7	Rev: 00
Created on: Date: 19.06.2023	Modified on: 29.06.2023

CHEMICAL COMPOSITION (%)/COMPOSICIÓN QUÍMICA (%)/CHEMISCHE ZUSAMMENSETZUNG (%)/COMPOSITION CHIMIQUE(%)

*L: Ladle C:Products

*	Heat	Seq	C	Mn	Si	P	S	Ni	Cr	Mo	Al	Cu
L	59571	1	0,010	0,71	0,310	0,027	0,0006	6,85	25,45	3,64	0,009	0,66
C	59571	5	0,010	0,70	0,290	0,027	0,0006	6,92	25,45	3,58	0,008	0,65
C	59571	6	0,010	0,70	0,290	0,027	0,0006	6,91	25,45	3,59	0,008	0,65

*	Heat	Seq	V	Nb	W	Co	N	Pren
L	59571	1	0,048	0,005	0,600	0,045	0,2405	41,3100
C	59571	5	0,047	0,006	0,590	0,047	0,2405	41,1120
C	59571	6	0,047	0,006	0,590	0,047	0,2405	41,1450

HEAT TREATMENT/TRATAMIENTO TÉRMICO/WÄRMEBEHANDLUNG/TRAITEMENT THERMIQUE

HIPERTEMPLADOS A 1100 °C , Agua
SOLUTION ANNEALED AT 1100 °C , WATER
HYPERTREMPES 1100 °C , L' EAU
LOESUNGSGEGLUEHT 1100 °C , Wasser

TENSILE TEST/TEST DE TENSIÓN/ESSAI TRACTION/ZUGVERSUCH

Lot No.	Sample	T	Rp0.2	Rp1.0	Rm	A2"	A5	Type	Spc.Type	Spc.Dim
		°C	*MPa*	*MPa*	*MPa*	*%*	*%*			*mm*
P2302287	1	20	654	717	840	37	37	L	S	20,12
	2	20	649	715	831	35	35	L	S	20,11

CORROSION ACCORDING TO ASTM A923 C/CORROSION DE ACUERDO ASTM A923 C/CORROSION SUIVANT ASTM A923 C/CORROSION ACCORDING TO ASTM A923 C

Lot No.	Sample	T	Pits-20x	Wloss	time
		°C		*MDD*	*Horas*
P2302287	1	50	N	1,7750	24,0

Corrosion test ASTM G48 practice A/Corrosión ASTM G48 práctica A/TEST DE CORROSION ASTM G48 practice A/LOCHFRASSTEST ASTM G 48 PR.A

Lot No.	Sample	T	Pits-20x	W.loss	time
		°C		*g/m2*	*Horas*
P2302287	1	50	N	0,1775	24,0

HARDNESS TEST/TEST DE DUREZA/DUREE/HÄRTEPRÜFUNG

Lot No.	Sample	0°Ext1	0°Ext2	0°Ext3	0°Int1	0°Int2	0°Int3	90°Ext1	90°Ext2	90°Ext3	90°Int1	90°Int2	90°Int3	180°Ext1
		HRC	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*
P2302287	1	16,3	15,7	17,6	15,9	15,1	14,3	15,1	15,6	15,9	16,2	15,8	16,8	14,7

Lot No.	Sample	180°Ext 2	180°Ext3	180°Int1	180°Int2	180°Int3	270°Ext1	270°Ext2	270°Ext3	270°Int1	270°Int2	270°Int3
		HRC	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*
P2302287	1	15,6	15,3	17,1	16,5	16,4	17,2	16,1	16,0	15,9	15,7	14,8

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AENOR Gestión Ambiental UNE EN ISO 14001

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TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

Iñigo Arriola Alcibar

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Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 114.30x3.05 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59571 - Qty:6,68

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY * Issued 22-05-2024

TTI TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RÉCEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 745216 Page: 4 / 7	Rev: 00
Created on: Date: 19.06.2023	Modified on: 29.06.2023

FERRITE ACCORDING TO ASTM E 562/Contenido de Ferrita según ASTM E562/FERRITE SUIVANT ASTM E562/FERRIT ENTSPRECHEND ASTM E562

Lot No.	Sample	%Fer	Dev.Ferr
		%	%
P2302287	1	53,53	1,99

METALURGICAL TESTS/ENSAYOS METALÚRGICOS/METALLURGISCHE PRÜFUNGEN/ESSAIS METALLURGIQUES

ETCH STRUCTURE ACC. ASTM A923 MET.A: UNAFFECTED STRUCTURE. MATERIAL FREE FROM INTERMETALLIC PHASES AND PRECIPITATES. UNIFORM STRUCTURE ACROSS FULL WALL THICKNESS

EXAMEN DE MICROESTRUCUTRA DE ACUERDO A ASTM A923 MET.A: ESTRUCTURA NO AFECTADA. MATERIAL LIBRE DE FASES INTERMETALICAS Y PRECIPITADOS. ESTRUCTURA UNIFORME A TRAVES DEL ESPESOR.

ETCH STRUCTURE ACC. ASTM A923 MET.A: UNAFFECTED STRUCTURE. MATERIAL FREE FROM INTERMETALLIC PHASES AND PRECIPITATES. UNIFORM STRUCTURE ACROSS FULL WALL THICKNESS

INTERGRANULAR CORROSION TEST ACC. TO ASTM A262 PRACT."E": SATISFACTORY

ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ASTM A262 PRACT.E: SATISFACTORIO

BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND ASTM A262 PRACT.E: IN ORDNUNG

ESSAI DE CORR. INTERGR. SELON ASTM A262 PRACT.E:SATISFAISANT

INTERGRANULAR CORROSION TEST ACC.TO DIN EN ISO 3651-2 MET.B: SATISFACTORY

ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ISO 3651-2 MET.B: SATISFACTORIO

BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND ISO 3651-2 MET."B": IN ORDNUNG

ESSAI DE CORR. INTERGR. SELON ASTM ISO 3651-2 MET."B":SATISFAISANT

NON-DESTRUCTIVE TESTS/ENSAYOS NO DESTRUCTIVOS/ZERSTÖRUNGSFREIE PRÜFUNGEN/ESSAIS NON DESTRUCTIFS

FERRITE CONTENT DETERMINED BY FISCHER FERRITOSCOPE TO 100% OF PRODUCTS

CONTENIDO EN FERRITA MEDIDO CON FERRITOSCOPIO SOBRE EL 100% DEL MATERIAL.

Ferritescope-Test auf 100% des Materials.

100% ULTRASONIC TEST ACC. TO ASTM A999 / E213: SATISFACTORY

100% ENSAYO DE ULTRASONIDOS DE ACUERDO A ASTM A999 / E213: SATISFACTORIO

100% ULTRASCHALLPRÜFUNG NACH ASTM A999 / E.213:IN ORDNUNG

100% ESSAI D´ULTRASON D'ACCORD A ASTM A999 / E.213: SATISFAISANTE

100% ULTRASONIC TEST ACC. TO EN 10246-7, U2C: SATISFACTORY

100% ENSAYO DE ULTRASONIDOS DE ACUERDO A EN 10246-7, U2C: SATISFACTORIO

100% ULTRASCHALLPRÜFUNG NACH EN 10246-7, U2C:

AENOR ER Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

Iñigo Arriola Alcibar

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TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate. TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 114.30x3.05 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59571 - Qty:6,68

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

TTI TUBACEX GROUP

INSPECTION CERTIFICATE, CERTIFICADO DE INSPECCIÓN CERTIFICAT DE RÉCEPTION ABNAHMEPRÜFZEUGNIS EN 10204:2004 / 3.1

Number: 745216 Page: 5 / 7	Rev: 00
Created on: Date: 19.06.2023	Modified on: 29.06.2023

IN ORDNUNG
100% ESSAI D´ULTRASON D'ACCORD A EN 10246-7, U2C: SATISFAISANTE
POSITIVE MATERIAL IDENTIFICATION TEST ON EACH TUBE/PIPE BY "X-RAY-FLUORESCENCE-ANALYZER": SATISFACTORY
VERIFICACION DEL GRADO DE ACERO EN CADA TUBO MEDIANTE "ANALIZADOR DE FLUORESCENCIA DE RAYOS X": SATISFACTORIO
VERWECHSLUNGSPRUEFUNG AN JEDEM ROHR MIT "RÖNTGEN-FLUORESZENZ-ANALYSATOR": IN ORDNUNG
VERIFICATION DE LA NUANCE SUR CHAQUE TUBE PAR "X-RAY-FLUORESCENCE-ANALYZER": SATISFAISANT

HYDROSTATIC PRESSURE TESTED AT 120 bar, 1700 PSI DURING 5 SEC ON EACH TUBE/PIPE: SATISFACTORY
ENSAYO HIDROSTÁTICO A 120 bar, 1700 PSI DURANTE 5 SEC EN CADA TUBO: SATISFACTORIO
WASSERDRUCKPRÜFUNG BEI 120 bar, 1700 PSI HALTEZEIT 5 SEC JE ROHR: IN ORDNUNG
ESSAI DE PRESSION HYDROSTATIQUE À 120 bar, 1700 PSI PENDANT 5 SEC SUR CHAQUE TUBE: SATISFAISANT
100% EDDY CURRENT TEST AT ASTM E426: SATISFACTORY
100% ENSAYO DE CORRIENTES INDUCIDAS DE ACUERDO A ASTM E426: SATISFACTORIO
100% WIRBELSTROM PRUEFUNG NACH ASTM E426: O.B.
100% CONTROLE COURANTS FOUCAULT D'APRES ASTM E426: BIEN

DIMENSIONAL CHECKING ON EACH TUBE: SATISFACTORY
INSPECCION DIMENSIONAL AL 100% DE LOS TUBOS SATISFACTORIA
100% MASSKONTROLLE: O.B.
VERIFICATION DIMENTIONNELLE AU 100% DES TUBES, SATISFAISANTE

VISUAL INSPECTION ON EACH TUBE: SATISFACTORY
INSPECCION VISUAL AL 100% DE LOS TUBOS, SATISFACTORIA
100% BESIGCHTIGUNG: O.B.
EXAMEN VISUEL AU 100% DES TUBES, SATISFAISANT

TECHNOLOGICAL TESTS/ENSAYOS TECNOLÓGICOS/TECHNOLOGISCHE PRÜFUNGEN/TECHNOLOGICAL TESTS
FLARING TEST: SATISFACTORY
ABOCARDADO S.NORMA: SATISFACTORIO
AUFWEITVERSUCH: IN ORDNUNG
ESSAI D'EVASEMENT: SATISFAISANT

FLATTENING TEST: SATISFACTORY
APLASTADO S.NORMA: SATISFACTORIO
RINGFALTVERSUCH: IN ORDNUNG
ESSAI D'APLATISSEMENT: SATISFAISANT

AENOR Empresa Registrada UNE EN ISO 9001

AENOR Gestión Ambiental UNE EN ISO 14001

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TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

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Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 114.30x3.05 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59571 - Qty:6,68

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY * Issued 22-05-2024

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Number: 745216 Page: 6 / 7	Rev: 00
Created on: Date: 19.06.2023	Modified on: 29.06.2023

MARKING/ETIQUETADO/KENNZEICHNUNG/MARKSTEXT

TX2 TX1 TUBACEX 114,3 X 3,05 MM - 4" SCH 10S ASME SA790 ASTM A790 EN 10216-5 TC2 EN 10297-2 S32760 1.4501 CFD CD SMLS HEAT/ PMI-AV LOT NO/MADE IN SPAIN

REMARKS/OBSERVACIONES/ANMERKUNG/REMARQUES

NO MERCURY, MERCURY COMPOUNDS OR MERCURY BEARING INSTRUMENTS AND/OR EQUIPMENT HAVE BEEN USED ALONG MANUFACTURING AND INSPECTION PROCESS.
DURANTE LOS PROCESOS DE FABRICACIÓN E INSPECCIÓN NO SE HA USADO MERCURIO NI INSTRUMENTOS Y/O EQUIPOS CONTENIENDO MERCURIO O CON COMPONENTES DE MERCURIO.
KEINE QUEKSILBER, BZW. QUECKSILBERVERUNREINIGTES KOMPONENTEN ODER KUGELLAGERINSTRUMENTE UND/ODER GERÄTE SIND BENUTZT WORDEN PRODUKTIONS UND BESICHTIGUNGSPROZESS.
IL N'A PAS ÉTÉ FAIT USAGE DE MERCURE, DE COMPOSÉS CONTENANT DU MERCURE OU DE MATÉRIAUX ET/OU D'INSTRUMENT CONTENANT DU MERCURE TOUT AU LONG DES ÉTAPES DE FABRICATION ET DU PROCESSUS D'INSPECTION ET DE CONTRÔLE.

NO WELDING OR WELD REPAIRS WERE MADE
SIN REPARACION POR SOLDADURA
KEINE SCHWEISSBEARBEITUNG WURDE VORGENOMMEN
SANS RÉPARATION AVEC SOUDURE
MATERIAL MANUFACTURER APPROVED BY TÜV SÜD Industrie Service GmbH
(NOTIFIED BODY 036)TO ISSUE CERTIFICATES OF SPECIFIC PRODUCT CONTROL IN
ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU ANNEX I POINT 4.3.
FABRICANTE DE MATERIALES APROBADO POR TÜV SÜD Industrie Service GmbH (ORGANISMO NOTIFICADO 0036) PARA LA EMISION DE CERTIFICADOS ESPECIFICOS DE CONTROL DE PRODUCTO DE ACUERDO AL ANEXO I, PUNTO 4.3 DE LA DIRECTIVADE EQUIPOS A PRESION 2014/68/EU.
WERKSTOFFHERSTELLER MIT BERECHTIUNG ZUR AUSSTELLUNG VON BESCHEINIGUNGEN ÜBER SPEZIFISCHE PRÜFUNGEN AN DEN WERKSTOFFEN IM GELTUNGSBEREICH DER ZERTIFIZIERUNG UND IN ÜBEREINSTINSTIMMUNG MIT DER DRUCKGERÄTERICHTLINIE 2014/68/EU UND DEN ZUGRUNDE LIEGENDEN SPEZIFIKATIONEN ENTSPR. DER BENANNTEN STELLE NR.0036, TÜV SÜD Industrie Service GmbH
PRODUCTEUR DU MATERIEL APPROUVE PAR TÜV SÜD Industrie Service GmbH N.B. 0036) POUR EMISSION DES CERTIFICATS SPECIFIQUE DE CONTROLE DE PRODUIT SELON LA DIRECTIVE DES EQUIPES A PRESION 2014/68/EU ANNEXE I POINT 4.3.

MATERIAL CHARACTERISTICS COMPLY WITH POINT 7.5 OF ANNEX I TO PED BY HAVING AN ELONGATION AFTER RUPTURE AT TENSILE TEST NO LESS THAN 14% AND A BENDING RUPTURE ENERGY AT IMPACT TEST NO LESS THAN 27J AT 20ºC.
LAS CARACTERISTICAS DEL MATERIAL CUMPLEN CON LOS REQUISITOS DEL PUNTO 7.5 DE LA DIRECTIVA PED POR TENER UN ALARGAMIENTO TRAS ROTURA EN EL ENSAYO DE TRACCION NO INFERIOR AL 14% Y PO DE TRACCION NO INFERIOR AL 14% Y POR TENER UNA RESISTENCIA AL IMPACTO NO INFERIOR A 27 J A 20º C.
DIE WERKSTOFF-WERTE ENTSPRECHEN PUNKT 7.5. DER DGRL, ANHANG I, MIT EINERBRUCHDEHNUNG = 14% IM NORMGEMÄSS DURCHGEFÜHRTEN ZUGVERSUCH UND DER KERBSCHLAGARBEIT = 27J AN EINER ISO - v PRO PROBE BEI EINER TEMPERATUR VON HÖCHSTENS 20ºC
LES CARACTERISTIQUES DU MATERIEL, AYANT UN ALLONGEMENT APRES RUPTURE A L'ESSAI DE TRACTION NON INFERIEUR DU 14% ET UNE RESISTENCE A LA FLEXION PAR CHOC A 20ºC NON INFERIEUR A 27J, SONT CONFORMES AUX PRESCIPTIONS DU PONT 7.5 DE L'ANNEXE I DE PED.

MATERIAL IS FREE OF RADIATION CONTAMINATION
EL MATERIAL ESTA LIBRE DE CONTAMINACION POR RADIACIONES

AENOR ER Empresa Registrada UNE EN ISO 9001

AENOR Gestión Ambiental UNE EN ISO 14001

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INGENIERIA DE CALIDAD

Iñigo Arriola Aloibar

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Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 114.30x3.05 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59571 - Qty:6,68

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

TTI TUBACEX GROUP

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CERTIFICAT DE RÉCEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 745216 Page: 7 / 7	Rev: 00
Created on: Date: 19.06.2023	Modified on: 29.06.2023

REMARKS/OBSERVACIONES/ANMERKUNG/REMARQUES
MATERIAL IS FREI VON RADIOAKTIVITÄT
MATÉRIEL LIBRE DE POLUTION RADIOACTIVE

AENOR ER Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD
Iñigo Arriola Alcibar

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Description: 114.30x3.05 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59571 - Qty:6,68

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

TUBACEX GROUP	STRUCTURE EXAMINATION	MTC / Certificate
		745216

MATERIAL IDENTIFICATION / IDENTIFICACIÓN DEL MATERIAL

Lot No. / Num Lote	P2302287	Dimension / Dimensión	114,3 x 3,05 mm - 4'SCH 10
Heat / Colada	59571	Grado de acero / Steel grade	S32760

Type Of test / Tipo de Ensayo:	MICROSTRUCTURE EVALUATION

RESULTS / RESULTADO

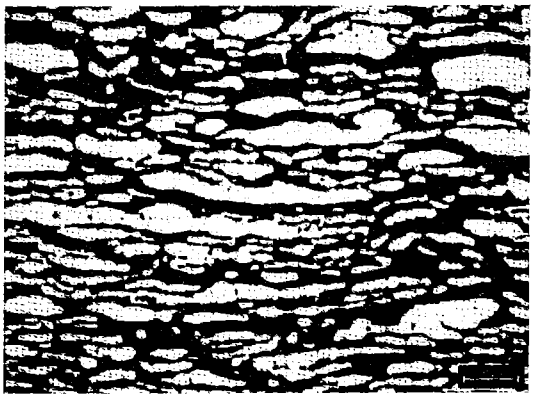
Result: The microestructure is formed by austenite and ferrite. The presence of intermetallic phases or precipitates is not observed. Uniform structure across full wall thickness Etching method according to ASTM E-407.

Resultado: la microestructura está compuesta por austenita y ferrita. No se observa la presencia de fases intermetálicas y precipitados. Estructura uniforme a través de todo el espesor. Método de ataque según ASTM E-407.

GRAPHICS RECORDS / REGISTROS FOTOGRÁFICOS:



Dir: LONGITUDINAL / MAG: 500X /



Dir: TRANSVERSAL / MAG: 500X /

María Cano
Responsable del Laboratorio
Laboratory Manager

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 114.30x3.05 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59571 - Qty:6,68

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

(A01) **Salzgitter Mannesmann Stainless Tubes Italia Srl**
(A05) Via Piò 30 - 24062 Costa Volpino (BG) - ITALY
www.mannesmann-stainless-tubes.com

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-24-00368-rev.01** Pag. 1 / 6

(A06) **Purchaser**	(A07) **Customer Order No**
RACCORTUBI Spa	PO 00000251S
Viale De Gasperi	(A08) **SMST-Tubes Order No**
20010 MARCALLO	0000295816
Milano	**SMST-Item** (A09) **Part No**
Italia	0000295816-000004

(B01) (B02) (B04) **Product Description**

Seamless Stainless Steel Cold Finished Pipes Solution Annealed Free From Scale Plain Ends Square Cut Deburred

Specifications ASME SA 790M 23;ASTM A 790M 23;NORSOK MDS D51 REV 06;RACCORTUBI RTX_D51S Rev.6; ANSI/NACE MR0103/ISO 17945 2016; ANSI/NACE MR0175/ISO 15156-3 2015

Grade UNS S32760;DMV 25.7N

Tolerances A 790M / A999;SA 790M / A999

(B03) Supplementary Requirements

None

(B06 - D01) Marking of the Product

Technical marking MANNESMANN MST-I - ASME SA 790 / ASTM A 790 - DMV 25.7N - UNS S32760 - NPS 3/4 X SCH 40 - 26,70 MM X 2,87 MM - SML - HEAT $HEAT_NBR$ - $QUAL_LOT_NBR$ - MADE IN ITALY - BUNDLE $BUNDLE_NBR$

Country of Origin of the tubes **Italy**

Quantity						Dimensions			
(B07) Heat	Quality Lot	SMST-Item	(B08) Pieces	(B13) Weight	(B16) Length	(B09) OD	(B10) WT	(B11) Ordered Length min	(B11) Ordered Length max
739859	QL40082122	000004	30	329.15 kg	194.000 m	26.70 mm	2.87 mm	5000 mm	7000 mm
				725.65 lbs	636.48 ft	NPS 3/4	SCH 40	16.40 ft	22.97 ft
				725.65 lbs	636.48 ft	1.051 "	0.113 "	16.40 ft	22.97 ft
BC4514	QL40082124	000004	4	40.67 kg	24.000 m	26.70 mm	2.87 mm	5000 mm	7000 mm
				89.66 lbs	78.74 ft	NPS 3/4	SCH 40	16.40 ft	22.97 ft
				89.66 lbs	78.74 ft	1.051 "	0.113 "	16.40 ft	22.97 ft
			34	**369.82 kg**	**218.000 m**				
			34	**815.31 lbs**	**715.22 ft**				

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: 26.67x2.87 SEAMLESS

raccortubi Heat num. or Pcs. marking: 739859 - Qty:6,51
Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

(A01) **Salzgitter Mannesmann Stainless Tubes Italia Srl**
(A05) Via Pio 30 - 24062 Costa Volpino (BG) - ITALY
www.mannesmann-stainless-tubes.com

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-24-00368-rev.01** Pag. 2 / 6

Heat Analysis

		Request	C	Si	Mn	P	S	Cr	Ni	Mo	N
	Min		0.00	0.00	0.00	0.00	0.0000	24.0	6.0	3.0	0.20
	Max		0.030	1.0	1.0	0.030	0.0100	26.0	8.0	4.0	0.30
(B07) Heat	Heat Origin	(C70) Melting Process	%	%	%	%	%	%	%	%	%
739859	Germany	EAF + AOD	0.017	0.35	0.65	0.025	0.0004	26.0	7.2	3.8	0.25
BC4514	Austria	EAF + AOD	0.019	0.34	0.49	0.022	<0.0003	25.7	7.1	3.7	0.25

		Request	Cu	W	PREN	PREN_W
	Min		0.50	0.50	40.0	41.00
	Max		1.0	1.0		
(B07) Heat	Heat Origin	(C70) Melting Process	%	%		
739859	Germany	EAF + AOD	0.59	0.60	42.3	43.29
BC4514	Austria	EAF + AOD	0.51	0.53	41.9	42.74

Product Analysis

NORSOK MDS D51;ASTM A 790M;D-232;ASME SA 790M

	Request	C	Si	Mn	P	S	Cr	Ni	Mo	N
	Min	0.00	0.00	0.00	0.00	0.0000	24.0	6.0	3.0	0.20
	Max	0.030	1.0	1.0	0.030	0.0100	26.0	8.0	4.0	0.30
Quality Lot	(C00) Sample	%	%	%	%	%	%	%	%	%
QL40082122	49245069	0.018	0.37	0.67	0.025	0.0007	25.9	7.1	3.8	0.25
QL40082124	49245077	0.019	0.36	0.50	0.022	0.0002	25.7	7.0	3.7	0.26

	Request	Cu	W	PREN	PREN_W
	Min	0.50	0.50	40.0	41.00
	Max	1.0	1.0	99.99	
Quality Lot	(C00) Sample	%	%		
QL40082122	49245069	0.60	0.60	42.47	43.46
QL40082124	49245077	0.50	0.53	42.21	43.08

(A01) **Salzgitter Mannesmann Stainless Tubes Italia Srl**
(A05) Via Pio 30 - 24062 Costa Volpino (BG) - ITALY
www.mannesmann-stainless-tubes.com

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-24-00368-rev.01** Pag. 3 / 6

Tensile Test at Room Temperature

ASTM A 370;D-220

(C02) Direction: LONGITUDINAL

(C10) Description: FULL SIZE TEST SPECIMEN

		(C11)	(C12)	(C13)
		YS 0.2%	U.T.S.	EL
		Rp 0,2%	Rm	50mm
Request	Min	550	800	25.0
Quality Lot	Max (C00) Sample	MPa	MPa	%
QL40082122	49245069	825	961	29.2
QL40082124	49245077	725	925	33.2

(C30) Hardness HRC

ASTM E 18;EN ISO 6508-1

			(C30) HRC		
		Request			32.0 max
Quality Lot	(C00) Sample	Result	(C31) Min	(C31) Max	(C32) Avg
QL40082122	49245069		28	29	28.5
	49245070		27	28	27.5
QL40082124	49245077		25	26	25.5
	49245078		26	27	26.5

(C50) Flattening Test

ASTM A 999;D-226

Quality Lot	(C00) Sample	Result
QL40082122	49245069	OK
	49245070	OK
QL40082124	49245077	OK
	49245078	OK

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INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

Pitting Corrosion Resistance Test

ISO 17781;D-237;ASTM G48 METHOD A

Quality Lot	(C00) Sample	Result
QL40082122	49245069	OK
QL40082124	49245077	OK

See attached certificate for results and details

Pitting Corrosion Resistance Test

ASTM A 923 METHOD C

Description: NO PITTING AT 20X

	Request Max			10.0000	
	Unit	HOURS	°C	MDD	
Quality Lot	(C00) Sample	Holding time	Temperature	Loss Weight	Result
QL40082122	49245069	24	50	2.29450	Satisfactory
QL40082124	49245077	24	50	2.05440	Satisfactory

Ferrite

D-236;ASTM E 562;ISO 17781

Quality Lot	(C00) Sample	Result
QL40082122	49245069	OK
QL40082124	49245077	OK

See attached certificate for results and details

Micrographic Examination Structure

ASTM E 407;D-259;ISO 17781

Quality Lot	(C00) Sample	Result
QL40082122	49245069	OK
QL40082124	49245077	OK

See attached certificate for results and details

(A01) **Salzgitter Mannesmann Stainless Tubes Italia Srl**
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INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-24-00368-rev.01** Pag. 5 / 6

Other Tests and Declarations

QL40082122; QL40082124

Heat Treatment Solution Annealed 1120 °C Holding Time 1 Min / mm WT MIN rapid cooling

(D01)	Visual and dimensional inspection (VT) on 100% of tubes according to the order	Satisfactory
(D51)	Antimixing Check (PMI) on 100% of tubes	Satisfactory
(D02)	Eddy Current Testing (ET) on 100% of tubes ASTM A 999; ASTM E 309	Satisfactory
(D52)	Hydro Pressure Test on 100% of tubes 5 sec. at 17.00 MPA ASTM A 999	Satisfactory
(D04)	Ultrasonic Testing (UT) on 100% of tubes ASTM E 213; ASTM A 999	Satisfactory

No Weld Repair

(Z01) SMST declares that the product was manufactured, sampled, tested, inspected and packed in accordance with the specifications and any other requirements designated in the purchase order within the extent listed in SMST order acknowledgment, and has been found to meet such requirements

Tubes are free from mercury contamination and from radioactive contamination

The material is conforming to directive 2000/53/EC and 2011/65/EU

Confirmation with reference to Pressure Equipment Directive 2014/68/EU:
The works operates a quality management system that has undergone a specific assessment for materials for pressure equipment and is certified by a competent body (TUV-Cert. No: 70/2002/MUC)

QTR ref. N°: SMST-I QTR- 017 rev. 11

(Z02) Mill's Inspector **Ruggero Clementi (QC)** Date of Edition **04/03/2024**

This certificate is issued by SALZGITTER MANNESMANN STAINLESS TUBES via a computerized system bearing a traceable unique number. It is valid without signature. An intermediary may only pass on the original certificate without any alterations. Providing a copy of the original is only permitted subject to strict compliance with the prerequisites set out in § 6 of EN 10204:2004 i.e. traceability and availability of the original upon request . Any modification or alteration of the certificate or any copies are strictly prohibited . Any contravention of this notice or § 6 of EN 10204:2004 is illegal and will be prosecuted. Any falsification of a certificate e.g. by introducing false or fraudulent data for the purpose of promoting the sales of goods is a criminal offence under German law (and many other jurisdictions) punishable with fines and imprisonment. If an authentification is needed, please contact info@mst.mannesmann.com

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(A02) EN 10204: 2004 TYPE 3.1

Certificate anti counterfeiting check

A set of information from the Inspection Certificate cover page are included in encrypted form in the above QR code.
By scanning it with your mobile device you can check if the Inspection Certificate is genuine.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: 26.67x2.87 SEAMLESS

raccortubi Heat num. or Pcs. marking: 739859 - Qty:6,51
Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

MANNESMANN
STAINLESS TUBES
A Member of the Salzgitter Group

Laboratory - Costa Volpino (BG) - Italy

FERRITE CONTENT EVALUATION IN AUSTENITIC-FERRITIC ASTM E 562 /ASTM E 1245

(Duplex and Super Duplex) STAINLESS STEELS GRADES

Reference standard Norsok M-650/ISO 17781

Order Nr.: 0000295816
Quality Lot: QL40082122
Sample Nr: 49245069
Heat Nr.: 739859
Grade: UNS S32760 (DMV25.7N)
Tube Dimensions: 26.70 x 2.87

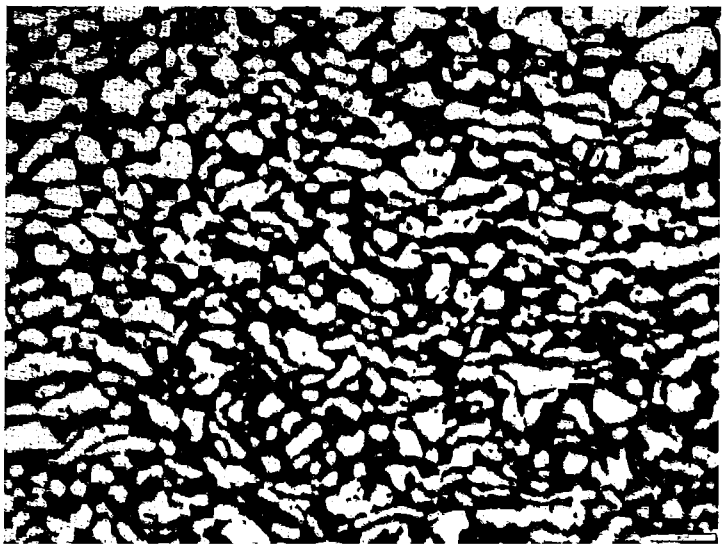
Reference to examination procedure Procedura di riferimento	D-236 rev. In force		
Identification of the test specimens Numero del campione	49245069		
Test Direction/Location Direzione test/Posizione	Transversal		
Specimen size (mm) Misure del campione (mm)	From 12 to 25 mm		
Etching Attacco	NaOH 20%		
Magnification Ingrandimenti	500x		
Total estimated volume % ± 95% CI Volume totale stimato % ± 95% CI	Acceptance criteria: Criteri di accettabilità:	Min 40%	Max 55%
	Result: risultati:	54.08% ± 0.61%	
% Standard deviation Deviazione standard %	1.63%		
% relative accuracy Accuratezza relativa %	1.13%		
Numero di campi per sezione metallografica Number of fields for metallographic section	30		
Descrizione Griglia Grid description	N/A		
Spaziatura e disposizione dei campi Field array description and spacing	10 x 3 – 400 µm		
Photo magnification Foto ingrandimenti	Yes 500x		
Identif. Test Machine used Strumento utilizzato	L- 960		

All. 1 Rev. 3 del 22 Febbraio 2019 (ref:D-236)

ROSETTI MARINO
Supply Management Dept
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Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 26.67x2.87 SEAMLESS



49245069 500x

Results are in conformity with the applicable test documents

	Function	Name & Signature	Date
Prepared by	Tech. Lab.	Forchini P.	26/02/2024
Approved by	Lab coord.	Bonomi S.	

ROSETTI MARINO
Supply Management Dept.
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All. 1 Rev. 3 del 22 Febbraio 2019 (ref:D-236)

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FERRITE CONTENT EVALUATION IN AUSTENITIC-FERRITIC ASTM E 562 /ASTM E 1245

(Duplex and Super Duplex) STAINLESS STEELS GRADES

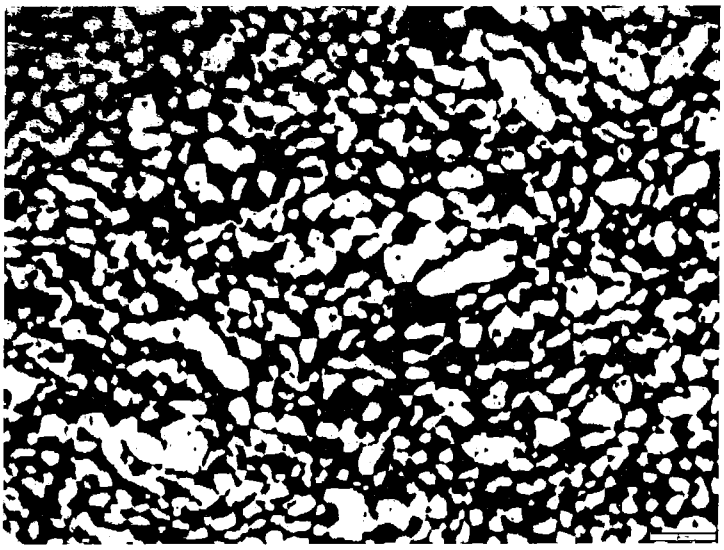
Reference standard Norsok M-650/ISO 17781

Order Nr.: 0000295816
Quality Lot: QL40082124
Sample Nr: 49245077
Heat Nr.: BC4514
Grade: UNS S32760 (DMV25.7N)
Tube Dimensions: 26.70 x 2.87

Reference to examination procedure Procedura di riferimento	D-236 rev. In force		
Identification of the test specimens Numero del campione	49245077		
Test Direction/Location Direzione test/Posizione	Transversal		
Specimen size (mm) Misure del campione (mm)	From 12 to 25 mm		
Etching Attacco	NaOH 20%		
Magnification Ingrandimenti	500x		
Total estimated volume % ± 95% CI Volume totale stimato % ± 95% CI	Acceptance criteria: Criteri di accettabilità:	Min 40%	Max 55%
	Result: risultati:	52.78% ± 0.28%	
% Standard deviation Deviazione standard %	0.75%		
% relative accuracy Accuratezza relativa %	0.53%		
Numero di campi per sezione metallografica Number of fields for metallographic section	30		
Descrizione Griglia Grid description	N/A		
Spaziatura e disposizione dei campi Field array description and spacing	10 x 3 – 400 µm		
Photo magnification Foto ingrandimenti	Yes 500x		
Identif. Test Machine used Strumento utilizzato	L- 960		

ROSETTI MARINO
Supply Management Dept.
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All. 1 Rev. 3 del 22 Febbraio 2019 (ref:D-236)



49245077 500x

Results are in conformity with the applicable test documents

	Function	Name & Signature	Date
Prepared by	Tech. Lab.	Forchini P.	26/02/2024
Approved by	Lab coord.	Bonomi S.	

ROSETTI MARINO
Supply Management Dept.
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All. 1 Rev. 3 del 22 Febbraio 2019 (ref:D-236)

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 26.67x2.87 SEAMLESS

raccortubi Heat num. or Pcs. marking: 739859 - Qty:6,51

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY * Issued 22-05-2024

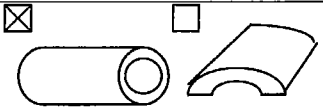
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CORROSION TEST ASTM G48 Method A

Reference standard Norsok M-650/ISO 17781

Order Nr.: 0000295816
Quality Lot: QL40082122
Heat Nr.: 739859
Grade: UNS S32760 (DMV25.7N)
Tube Dimensions: 26.70 x 2.87

Reference to examination procedure Procedura di riferimento	D-237 rev. In force
Identification of the test specimens Numero del campione	49245069
Section orientation transversal and longitudinal Orientamento sezione trasversale e longitudinale	☒ ☐ 
Specimen size (cm^2) and surface condition Misure del campione (cm^2) e superfice del campione	26.1497 cm^2 Delivered condition OD and ID surface, edges with 120-grit abrasive paper
Test temperature Temperatura di prova	50°C
Duration of the test Durata del test	24H
Initial Weight of specimen (with balance T-019) in g Peso iniziale del campione (con bilancia T-019) in g	24.6513 gr
Final Weight of specimen (with balance T-019) in g Peso finale del campione (con bilancia T-019) in g	24.6507 gr
Weight loss g Calo in peso g	0.0006 gr
Acceptance criteria (g/m^2) Criteri accettabilità (g/m^2)	1.00 gr/m^2
Result (g/m^2) Risultato (g/m^2)	0.2294 gr/m^2
Magnification used during examination Ingrandimenti usati per l'esame macro	20 X
Statement on presence of pitting Dichiarazione sulla presenza di pitting	Free of pitting

Results are in conformity with the applicable test documents

	Function	Name & Signature	Date
Prepared by	**Tech. Lab.**	Forchini P.	27/02/2024
Approved by	**Lab. Coord.**	Bonomi S.	

ROSETTI MARINO
Supply Management Dept.
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All. 1 Rev. 0 del 24 Gennaio 2019 (ref: D-237)

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 26.67x2.87 SEAMLESS

raccortubi Heat num. or Pcs. marking: 739859 - Qty:6,51

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

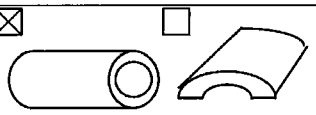
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CORROSION TEST ASTM G48 Method A

Reference standard Norsok M-650/ISO 17781

Order Nr.: 0000295816
Quality Lot: QL40082124
Heat Nr.: BC4514
Grade: UNS S32760 (DMV25.7N)
Tube Dimensions: 26.70 x 2.87

Reference to examination procedure Procedura di riferimento	D-237 rev. In force
Identification of the test specimens Numero del campione	49245077
Section orientation transversal and longitudinal Orientamento sezione trasversale e longitudinale	☒ ☐ 
Specimen size (cm^2) and surface condition Misure del campione (cm^2) e superfice del campione	29.2058 cm^2 Delivered condition OD and ID surface, edges with 120-grit abrasive paper
Test temperature Temperatura di prova	50°C
Duration of the test Durata del test	24H
Initial Weight of specimen (with balance T-019) in g Peso iniziale del campione (con bilancia T-019) in g	28.4065 gr
Final Weight of specimen (with balance T-019) in g Peso finale del campione (con bilancia T-019) in g	28.4059 gr
Weight loss g Calo in peso g	0.0006 gr
Acceptance criteria (g/m^2) Criteri accettabilità (g/m^2)	1.00 gr/m^2
Result (g/m^2) Risultato (g/m^2)	0.2054 gr/m^2
Magnification used during examination Ingrandimenti usati per l'esame macro	20 X
Statement on presence of pitting Dichiarazione sulla presenza di pitting	Free of pitting

Results are in conformity with the applicable test documents

	Function	Name & Signature	Date
Prepared by	**Tech. Lab.**	Forchini P.	27/02/2024
Approved by	**Lab. Coord.**	Bonomi S.	

ROSETTI MARINO
Supply Management Dept.
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All. 1 Rev. 0 del 24 Gennaio 2019 (ref: D-237)

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 26.67x2.87 SEAMLESS

raccortubi Heat num. or Pcs. marking: 739859 - Qty:6,51

Protocol: CTCERC202400004640 * CERTIFICATE COPY
* Issued 22-05-2024

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Laboratory - Costa Volpino (BG) - Italy

MICROSTRUCTURAL EVALUATION OF FERRITIC/AUSTENITIC

(DUPLEX AND SUPERDUPLEX) STAINLESS STEEL

Reference standard Norsok M-650 / ISO 17781

Order Nr.: 0000295816
Quality Lot: QL40082122
Heat Nr.: 739859
Grade: UNS S32760 (DMV25.7N)
Tube Dimensions: 26.70 x 2.87

Reference to examination procedure Procedura di riferimento	D-259 rev. In force
Identification of the test specimens Numero del campione	49245069
Test Direction/Location Direzione test/Posizione	Transverse/Full thickness
Specimen size (mm) Misure del campione (mm)	From 12 to 25 mm
Number of fields for metallographic section Numero di campi per sezione metallografica	30
Grid description Descrizione Griglia	Square 100 points Quadrata 100 punti
Etching for intermetallic phases Attacco per fasi intermetalliche	NaOH 20%
Etching to detected nitrides/carbides precipitates Attacco per determinare precipitati di nitruri/carburi	Oxalic Acid 10%
Magnification Ingrandimenti	400x
Acceptance criteria: Basically free from intermetallic precipitates and Nitrides/carbides Criteri di accettabilità: Fondamentalmente libero da precipitati intermetallici e nitruri/carburi	From 0% To 0% Result: 0.00%
Photo magnification Foto ingrandimenti	Yes – 400x
Identif. Test Machine used Strumento utilizzato	L-960

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

All. 1 Rev. 0 del 24 Gennaio 2019 (ref: D-259)

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: 26.67x2.87 SEAMLESS

raccortubi Heat num. or Pcs. marking: 739859 - Qty:6,51

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

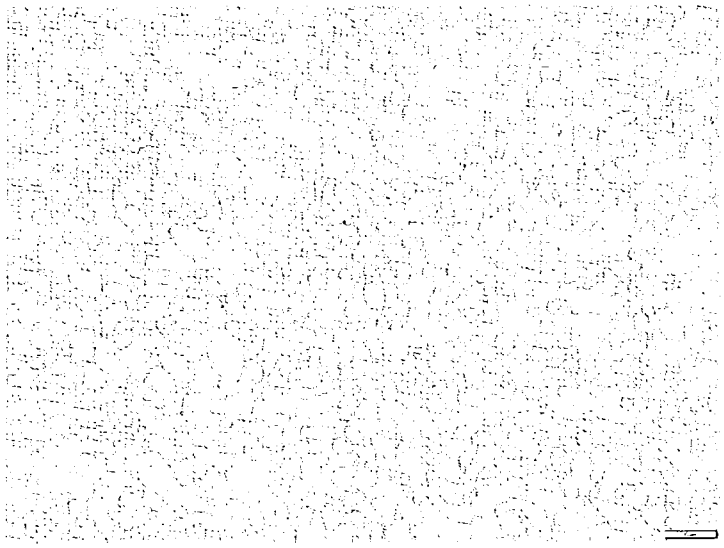
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Laboratory - Costa Volpino (BG) - Italy

MICROSTRUCTURAL EVALUATION OF FERRITIC/AUSTENITIC

(DUPLEX AND SUPERDUPLEX) STAINLESS STEEL

Reference standard Norsok M-650 / ISO 17781



49245069 400x

Results are in conformity with the applicable test documents

	Function	Name & Signature	Date
Prepared by	**Tech. Lab.**	Forchini P.	26/02/2024
Approved by	**Lab coord.**	Bonomi S.	

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

All. 1 Rev. 0 del 24 Gennaio 2019 (ref: D-259)

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 26.67x2.87 SEAMLESS

raccortubi Heat num. or Pcs. marking: 739859 - Qty:6,51

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

MANNESMANN
STAINLESS TUBES
A Member of the Salzgitter Group

Laboratory - Costa Volpino (BG) - Italy

MICROSTRUCTURAL EVALUATION OF FERRITIC/AUSTENITIC

(DUPLEX AND SUPERDUPLEX) STAINLESS STEEL

Reference standard Norsok M-650 / ISO 17781

Order Nr.: 0000295816
Quality Lot: QL40082124
Heat Nr.: BC4514
Grade: UNS S32760 (DMV25.7N)
Tube Dimensions: 26.70 x 2.87

Reference to examination procedure Procedura di riferimento	D-259 rev. In force
Identification of the test specimens Numero del campione	49245077
Test Direction/Location Direzione test/Posizione	Transverse/Full thickness
Specimen size (mm) Misure del campione (mm)	From 12 to 25 mm
Number of fields for metallographic section Numero di campi per sezione metallografica	30
Grid description Descrizione Griglia	Square 100 points Quadrata 100 punti
Etching for intermetallic phases Attacco per fasi intermetalliche	NaOH 20%
Etching to detected nitrides/carbides precipitates Attacco per determinare precipitati di nitruri/carburi	Oxalic Acid 10%
Magnification Ingrandimenti	400x
Acceptance criteria: Basically free from intermetallic precipitates and Nitrides/carbides Criteri di accettabilità: Fondamentalmente libero da precipitati intermetallici e nitruri/carburi	From 0% To 0% Result: 0.00%
Photo magnification Foto ingrandimenti	Yes – 400x
Identif. Test Machine used Strumento utilizzato	L-960

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

All. 1 Rev. 0 del 24 Gennaio 2019 (ref: D-259)

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: 26.67x2.87 SEAMLESS

raccortubi Heat num. or Pcs. marking: 739859 - Qty:6,51

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

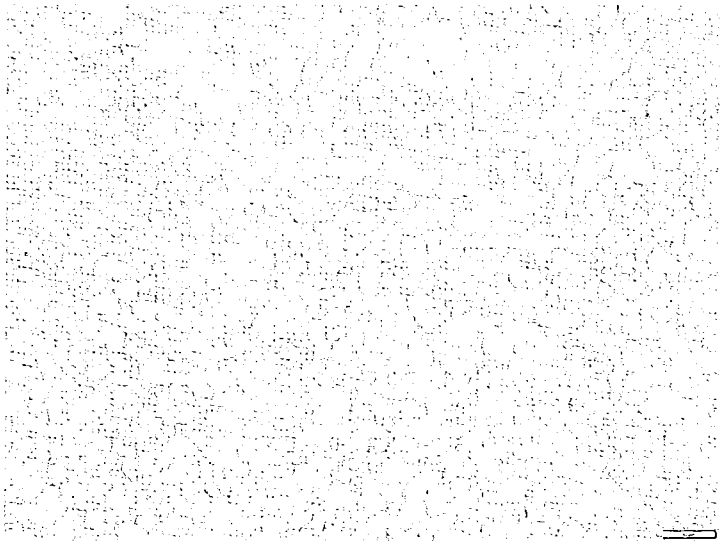
MANNESMANN
STAINLESS TUBES
A Member of the Salzgitter Group

Laboratory - Costa Volpino (BG) - Italy

MICROSTRUCTURAL EVALUATION OF FERRITIC/AUSTENITIC

(DUPLEX AND SUPERDUPLEX) STAINLESS STEEL

Reference standard Norsok M-650 / ISO 17781



49245077 400x

Results are in conformity with the applicable test documents

	Function	Name & Signature	Date
Prepared by	**Tech. Lab.**	Forchini P.	26/02/2024
Approved by	**Lab coord.**	Bonomi S.	

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

All. 1 Rev. 0 del 24 Gennaio 2019 (ref: D-259)

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 26.67x2.87 SEAMLESS

raccortubi Heat num. or Pcs. marking: 739859 - Qty:6,51

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

SANDVIK

CERTIFICATE

A03/Z02
No. A/19-847363 Rev 00
Date 2019-09-30 Page 1/3

A02/Z03
INSPECTION CERTIFICATE acc to
EN 10204 3.1

209368

INSPECTION STAMP
QA-TUBE

Customer References	A07	Sandvik References	A08
	Customer order	Order No.	Subs No. ABSMT Dispatch note
837250	2019-05-29	537220	670853 04127/54
		ABSMT No.	C.Code
125-00991 SVERDR EUR		300-97261	03

Material description B01/B04
SEAMLESS STAINLESS HOT FINISHED PIPE

Steel making process C70
Electric furnace+AOD

Steel/material Designations B02

Sandvik	UNS
SAF 2507	S32750
EN no	
1.4410	

REVIEWED

Technical requirements B03
ASTM A-790-18, ASME SA-790-ED-17
NORSOK M-630 ED-6, NORSOK MDS D51 REV.5, NP-T-010-0 Rev.0
NACE MR0175/ISO 15156-3:-2015, NACE MR0103/ISO 17945-1:-2015
PED 2014/68/EU EN 10216-5 TC1

EXTENT OF DELIVERY B07-B13

	It	Product designation	Heat	Lot	Pieces	Kg	M
3	02	TST-E-SAF2507-11/2-SCH40 48.26 X 3.68	556787	15933	140	3200.0	766.97
				Total	140	3200.0	766.97

TEST RESULTS
Chemical composition (weight%)

Heat	PRE
556787	42.9

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
556787	0.015	0.32	0.66	0.023	0.0008	25.72	6.54	3.86

Heat	Cu	N
556787	0.20	0.277

Quality assurance - Helen Jämtemyr / QA-manager A05/Z02
MTC Service / Certificates

A01 AB SANDVIK MATERIALS TECHNOLOGY Reg No: 556234-6832 VAT No. SE663000-060901
SE-81181 SANDVIKEN SWEDEN www.smt.sandvik.com mtc_service.smt@sandvik.com

ROSETTI MARINO
Witness

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 40 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 48.26x3.68 SEAMLESS

raccortubi Heat num. or Pcs. marking: 556787 - Qty:60,27

Protocol: CTCERC202400004640 * CERTIFICATE COPY
* Issued 22-05-2024

SANDVIK

CERTIFICATE No. A/19-847363 Rev 00

Date 2019-09-30 Page 2/3

Tensile test at room temperature

	Yield strength Mpa.	MPa	Tensile strength Mpa	Elongation %	%
Lot	Rp0.2	Rp1.0	Rm	A	2"
15933	652	701	835	35	32
	641	690	834	35	32

Hardness test

	Min	Max
Lot	HRC	HRC
15933	26	27

Ferrite acc to ASTM E-562

Lot	%
15933	48.4

Corrosion test acoording to ASTM G-48A, 50°C for 24 hours.
In delivery condition.
No pitting corrosion found at 20x enlargement.

	Specimen weight loss
Lot	g/m2
15933	0.00

Following controls/tests have been satisfactorily performed:
- The structure, examined at 400x magnifications is free from detrimental intermetallic phases and precipitates.
- Flattening test.
- Flaring test
- 100% PMI-test.
- Leak test: Eddy current test acc to EN ISO 10893-1 and ASTM Pr.E309 with drilled hole as reference standard in lieu of hydrostatic test.
- Visual inspection and dimensional control.

Heat Treatment:
Solution annealed at a temperature of 1075° C, 5 minutes
and quickly cooled with water.

Marking:
SANDVIK SAF 2507 ASTM A790 ASME SA790 EN10216-5 TC1 UNS S32750 EN 1.4410 HFD S ML 48.26 X 3.68 MM 1 1/2 SCH 40S HT 556787 SS LOT 15933 *QA-TUBE*

The raw material is free from radioactive contamination.

Material free from mercury contamination.

No welding or weld repair.

NORSOK M-650 QTR NO: QTR25Cr_H_326

NORSOK M-650 QTR NO: QTR25Cr_C326

Approved acc. AD 2000-Merkblatt W0 and certified acc. to Pressure Equipment Directive (2014/68/EU, Annex 1 para 4.3) by TUEV NORD; notified body, reg.no. 0045.

The number of tests are based on the size of the manufacturing lot before cutting to finished lengths.

SANDVIK

CERTIFICATE No. A/19-847363 Rev 00

Date 2019-09-30 Page 3/3

The delivered products comply with the specifications and requirements of the order.

The material is manufactured according to a Quality system, approved and registered to ISO 9001:2015.

No unauthorized alterations. The contents of this Inspection Certificate may not be modified or revised in any way without the prior written approval of AB Sandvik Materials Technology. Unauthorized alterations to the Inspection Certificate, including introduction of false, fictitious or fraudulent statements or entries, may be punishable by fines, imprisonment, or both. This Inspection Certificate may be copied only in the manner and for the purposes specified in Section 6 of EN 10204:2004. Contravention of this notice will be prosecuted to the fullest extent of applicable law.

The certificate is produced with EDP and valid without signature.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

AB SANDVIK MATERIALS TECHNOLOGY Reg No. 556234-6832 VAT No. SE663000-060901
SE-81181 SANDVIKEN SWEDEN www.smt.sandvik.com mtc_service.smt@sandvik.com

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 40 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 48.26x3.68 SEAMLESS

raccortubi Heat num. or Pcs. marking: 556787 - Qty:60,27

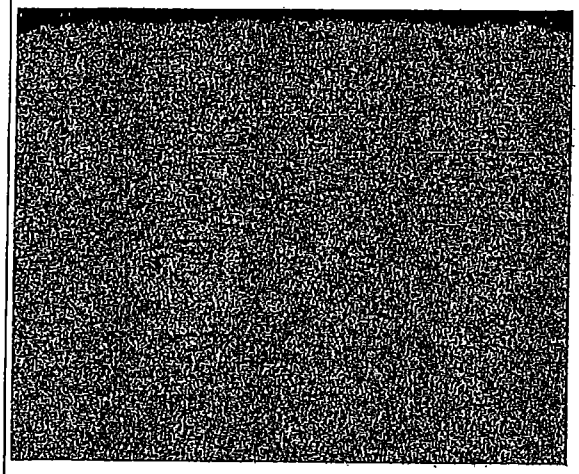
Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY * Issued 22-05-2024

Microstructure Examination Report

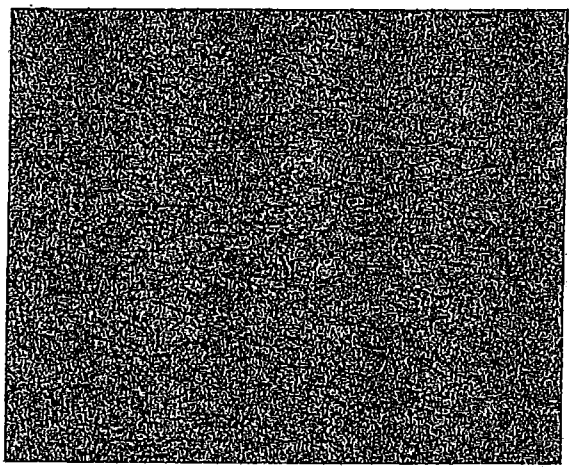
Material Information	
Grade	SAF2507
Heat	556787
Lot	15933-5
Dim	48,26X3,68

Technical Information	
Certificate No.	A/19-847363
Test Date	2019-09-20
Etchant	NAOH
Test Result	OK

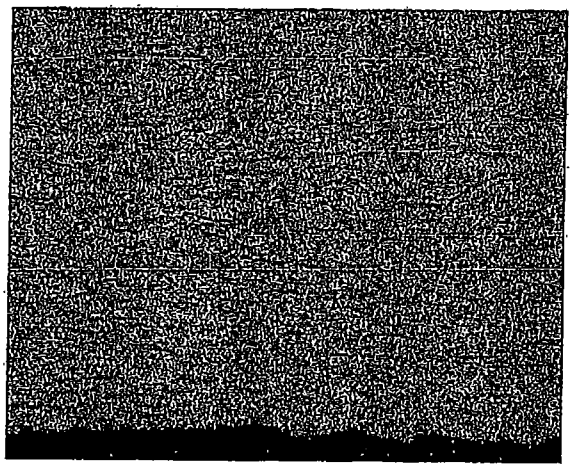
Test No: 639 O | Magnification: 400x



Test No: 639 C | Magnification: 400x



Test No: 639 I | Magnification: 400x



STQD:Emelie Karlsson (SANDVIK\ko8819)

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 40 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 48.26x3.68 SEAMLESS

Customer: ROSETTI MARINO S.p.A.
Description: 33.40x3.38 SEAMLESS
raccortubi Heat num. or Pcs. marking: 235689 - Qty:306,00
Order: 1724000839 - 22.04.24 - Item n.: 50 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020 10
Protocol: CTCERC2024000040 40 * CERTIFIED TRUE COPY * Issued 22-05-2024
CTCERT2024000024777.1.0001

Welspun SPECIALTY SOLUTIONS

Alloy & Stainless | Bars & Tubes

Plot No. 1, G.I.D.C Industrial Estate, Jhagadia-Valia Road, Jhagadia, Dist. -Bharuch- 393 110, Gujarat, India. (Tel.) - +91-70690 85579, (Website) - www.welspunspecialty.com
Manufacturer of Stainless Steel Seamless Pipes , Tubes & U Tubes

Manufacturer's Mark | QR Code | Client / TPI Mark

MATERIAL TEST CERTIFICATE

FORMAT NO.- QMS-QA/QC-F-42, REV. NO. & DATE : 02, 19.08.2019

Customer	M/s. RACCORTUBI S.p.A	Customer PO No.	00000060 S_Rev.01	Date	07.11.2023
	Viale De Gasperi 194, 20010 Marcallo con Casone, Milano Italy	SO No.	4120000280	Date	-
MTC Type	EN 10204 Type 3.1 & PED 2014/68/EU	MTC No.	WSSL/SP-316L/0923/1223	Date	30.12.2023
Project Details	---				

Material Description	AUSTENITIC STAINLESS STEEL COLD FINISHED (CFD) SEAMLESS PIPES, PLAIN END	Specs & Grades	ASTM A-312 Ed-2021 TP316/TP316L, ASME Sec. II Part "A" SA-312 Ed-2021 TP316/TP316L, EN 10216-5 TC1 Ed. 2021 1.4401/1.4404, NACE MR 0175/ISO 15156-3 Ed. 2015 & MR0103/ISO 17495-1 Ed.2016 ANSI B36.19
Heat Treatment	SOLUTION ANNEALING AT 1060 ± 10°C TEMP. FOLLOWED BY WATER QUENCHING	Dimensions	ASTM/ASME-A/SA-312/999
		Approved QAP No	WSSL/QAP/051-1123 Rev.00 & Date 22.11.2023
		TDC Reference	Purchasing Specification RTX_SES Rev.5 Dtd. 13.09.2022
		Surface Condition	SOLUTION ANNEALED, PICKLED & PASSIVATED

Approved acc. to AD 2000 Merkblatt W0 and certified as per PED (2014/68/EU) Annex. I, Sec.4.3 by certification body for Pressure Equipment of TÜV SÜD Industrie Service GmbH (Reg. No.0036)

Chemical Composition in %

PO Sr. No.	Heat No.	OD (mm)	THK (mm)	Length (Mtr)	No. of Pcs.	Total Mtrs.	LA / PA	C	Si	Mn	P	S	Cr	Ni	Mo	Nb	Cu	N	PMI & VDI Check 100%
							Min	-	-	-	-	-	16.50	10.00	2.00	-	-	-	-
							Max	0.030	1.00	2.00	0.040	0.015	18.00	13.00	2.50	-	-	0.10	-
							LA	0.017	0.33	1.53	0.036	0.011	16.80	10.03	2.02	-	-	0.0670	-
29	235689	33.40	3.38	6.00	74	444.000	P.A	0.017	0.321	1.516	0.035	0.010	16.791	10.018	2.014	-	-	0.0664	OK

Mandatory & Supplementary Test Conformity

PO Sr. No.	Heat No.	OD (mm)	THK (mm)	Tensile Strength MPa	Yield Strength 0.2% offset MPa	Yield Strength 1% offset MPa	Elongation (%) (Gauge Length = 5.65 √(Area))	Hardness (HRB)	Drift Expanding Test	Flattening Test	Macro Test	IGC Test as per ASTM A262 Practice E	Hydro Test 100% (HOLDING TIME 5 SEC. Min., Chloride Content <25 ppm)	Ultrasonic Test	DPT
				515 - 690	min.=205	min.= 240	40% min.	99 HRB Max.		-	-				
29	235689	33.40	3.38	620.070	375.619	397.634	49.11	76-84	Satisfactory	Satisfactory	-	Satisfactory	OK (Test Pressure : 2500 PSI (g))	--	---
				619.298	308.056	343.549	48.19								

Remark / Spl. Note	STEEL MELTING PROCESS : I.F + A.O.D .
	SAMPLING OF TEST COUPONS AND MECHANICAL TESTING(TENSILE TEST, DRIFT EXPANDING TEST, FLATTENING TEST & HARDNESS) CARRIED OUT BY WSSL : FOUND SATISFACTORY.
	DIRECTION OF TENSILE SPECIMEN: LONGITUDINAL
	PRODUCT ANALYSIS & IGC TEST (ASTM A262 PRACTICE "E") CARRIED OUT BY WSSL : FOUND SATISFACTORY.
	100% HYDRO TEST CARRIED OUT BY WSSL : FOUND SATISFACTORY.
	100% VISUAL AND DIMENTIONS CHECKED BY WSSL : FOUND SATISFACTORY.
	100% POSITIVE MATERIAL IDENTIFICATION CARRIED OUT BY WSSL : FOUND SATISFACTORY.
	LAND OF MELTING -INDIA (WELSPUN SPECIALTY SOLUTIONS LTD- STEEL PLANT)HS CODE : 72042190
	BILLETS MANUFACTURER-INDIA (WELSPUN SPECIALTY SOLUTIONS- STEEL PLANT)HS CODE : 7218
	RAW MATERIAL HS CODE : 72221199
	AS PER NACE MR-0175/ISO 15156-3 / NACE MR 0103 / ISO 17945-3 HARDNESS REQ. 22 HRC MAX. (99 HRB APPROX.) : FOUND SATISFACTORY.
	PIPES/HOLLOW BARS (WELSPUN SPECIALTY SOLUTIONS- STEEL PLANT/PIPES PLANT) HS CODE : 73044100
	MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT.
Marking	(W) WSSL SMLS CFD PIPE ASTM/ASME-A/SA-312 / EN 10216-5 TC-1 TP 316/316L/1.4401/1.4404 33.40 MM OD X 3.38 MM THK X 6000 MM LENGTH HEAT NO. 235689 WSSL-01 PO NO. 00000060 S

L.A - LADLE ANALYSIS, P.A - PRODUCT ANALYSIS, VDI - VISUAL & DIMENTIONAL INSPECTION, PMI - POSITIVE MATERIAL IDENTIFICATION, TC - TEST CERTIFICATE , TDC - TECHNICAL DELIVERY CONDITIONS, WSSL - WELSPUN SPECIALTY SOLUTIONS LIMITED.

Overall liability of WSSL is limited to the value of the defective material supplied to proven evidence of manufacturing defects only & not application failure/misuse.

Material Produced & Supplied is Free From any major Harmful Mercury or other Radioactive Contamination.

Duplication / Forged Photocopy / Unauthorised Usage of any documentary property of WSSL is a punishable criminal act & subject to Law of Indian Jurisdiction.

Insist on Authentically Sealed Certificate
(Photocopy Invalid)

We Certify that the Material Herein Described Have Been Manufactured & Tested in accordance of the above Specifications & the Results comply in accordance to the Requisite of the Order.

Prepared By
Engineer-QA/QC

Authorised By
Head - QA/QC

WELSPUN SPECIALTY SOLUTIONS LTD. JHAGADIA

ROSETTI MARINO
Supply Management Dept.
Witness Review

Customer: ROSETTI MARINO S.p.A.

Description: 48.26x3.68 SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 60 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000210

raccortubi Heat num. or Pcs. marking: 235415 - Qty:189.36

Protocol: CTCERC20240000640 * CERTIFIED TRUE COPY * Issued 22-05-2024

Welspun SPECIALTY SOLUTIONS

Alloy & Stainless | Bars & Tubes

Plot No. 1, G.I.D.C Industrial Estate, Jhagadia-Valia Road, Jhagadia, Dist.-Bharuch- 393 110, Gujarat, India, (Tel.) - +91-70690 05579, (Website) - www.welspunspecialty.com
Manufacturer of Stainless Steel Seamless Pipes , Tubes & U Tubes

Manufacturer's Mark | QR Code

Client / TPI Mark

MATERIAL TEST CERTIFICATE

FORMAT NO.- QMS-QA/QC-F-42, REV. NO. & DATE : 02, 19.08.2019

Customer	M/s. RACCORTUBI S.p.A	Customer PO No.	00000174 S	Date	03.07.2023
	Viale De Gasperi 194, 20010 Marcallo con Casone, Milano Italy	SO No.	4120000217	Date	-
MTC Type	EN 10204 Type 3.1	MTC No.	WSSL/SP-316L/0757/1023	Date	25.10.2023
Project Details	—				

Material Description	AUSTENITIC STAINLESS STEEL COLD FINISHED (CFD) SEAMLESS PIPES, PLAIN END	Specs & Grades	ASTM A-312 Ed-2021 TP316/TP316L, ASME Sec. II Part "A" SA-312 Ed-2021 TP316/TP316L, EN 10216-5 TC1 Ed. 2021 1.4401/1.4404, NACE MR 0175/ISO 15156-3 Ed. 2015 & MR0103/ISO 17495-1 Ed.2016 ANSI B36.19
Heat Treatment	SOLUTION ANNEALING AT 1060± 10°C TEMP. FOLLOWED BY WATER QUENCHING	Dimensions	ASTM/ASME-A/SA-312/999
		TDC Reference	Purchasing Specification RTX_SES Rev.5 Dtd. 13.09.2022
		Surface Condition	SOLUTION ANNEALED, PICKLED & PASSIVATED

Chemical Composition in %

Sr. No.	Heat No.	OD	THK	Length (Mtr)	No. of Pcs.	Total Mtrs.	LA / PA	C	Si	Mn	P	S	Cr	Ni	Mo	Nb	Cu	N	PMI & VDI Check 100%
							Min	-	-	-	-	-	16.50	10.00	2.00	-	-	-	-
							Max	0.030	1.00	2.00	0.040	0.015	18.00	13.00	2.50	-	-	0.10	-
							LA	0.022	0.27	1.59	0.040	0.010	16.95	10.11	2.03	-	-	0.0940	-
1	235316	48.26 MM (1 1/2" NPS)	3.68 MM (Sch. 40S)	5.00 - 7.00	36	215.790	PA	0.021	0.263	1.585	0.039	0.010	16.942	10.106	2.024	-	-	0.0936	OK
							LA	0.015	0.30	1.60	0.038	0.011	16.85	10.10	2.11	-	-	0.0666	-
2	235415	48.26 MM (1 1/2" NPS)	3.68 MM (Sch. 40S)	5.00 - 7.00	153	955.595	PA	0.015	0.295	1.591	0.037	0.010	16.846	10.094	2.102	-	-	0.0663	OK

Mandatory & Supplementary Test Conformity

PO Sr. No.	Heat No.	OD	THK	Tensile Strength MPa	Yield Strength 0.2% offset MPa	Yield Strength 1% offset MPa	Elongation (%) (Gauge Length = 50mm)	Hardness (HRB)	Flaring Test	Flattening Test	Macro Test	IGC Test as per ASTM A262 Practice E	Hydro Test 100% (HOLDING TIME 5 SEC. Min., Chloride Content <25 ppm)	Ultrasonic Test	DPT
				515 - 690	min.=205	min.= 240	40% min.	99 HRB Max.	-	-	-				
1	235316	48.26 MM (1 1/2" NPS)	3.68 MM (Sch. 40S)	602.194	300.438	324.912	53.460	84-87	-	Satisfactory	-	Satisfactory	OK (Test Pressure : 2300 PSI (g))	—	—
				606.328	306.672	330.730	53.400								
2	235415	48.26 MM (1 1/2" NPS)	3.68 MM (Sch. 40S)	610.072	304.218	332.642	53.360	83-86	-	Satisfactory	-	Satisfactory	OK (Test Pressure : 2300 PSI (g))	—	—
				608.462	298.886	328.094	53.300								

Remark / Spl. Note	STEEL MELTING PROCESS : I.F + A.O.D . SAMPLING OF TEST COUPONS AND MECHANICAL TESTING(TENSILE TEST, FLATTENING TEST & HARDNESS) CARRIED OUT BY WSSL : FOUND SATISFACTORY. DIRECTION OF TENSILE SPECIMEN: LONGITUDINAL PRODUCT ANALYSIS & IGC TEST (ASTM A262 PRACTICE "E") CARRIED OUT BY WSSL : FOUND SATISFACTORY. 100% HYDRO TEST CARRIED OUT BY WSSL : FOUND SATISFACTORY. 100% VISUAL AND DIMENTIONS CHECKED BY WSSL : FOUND SATISFACTORY. 100% POSITIVE MATERIAL IDENTIFICATION CARRIED OUT BY WSSL : FOUND SATISFACTORY. LAND OF MELTING -INDIA (WELSPUN SPECIALTY SOLUTIONS LTD- STEEL PLANT)-HS CODE-72042190 BILLETS MANUFACTURER-INDIA (WELSPUN SPECIALTY SOLUTIONS- STEEL PLANT)HS CODE-7218 RAW MATERIAL HS CODE :72221199 AS PER NACE MR-0175/ISO 15156-3 / NACE MR 0103 / ISO 17945-3 HARDNESS REQ. 22 HRC MAX. (99 HRB APPROX.) : FOUND SATISFACTORY. PIPES/HOLLOW BARS (WELSPUN SPECIALTY SOLUTIONS- STEEL PLANT/PIPES PLANT) HS CODE : 73044100 MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT.
Marking	WSSL SMLS CFD PIPE ASTM/ASME-A/SA-312 / EN 10216-5 TC-1 TP 316/316L/1.4401/1.4404 48.26 MM OD (1 1/2" NPS) X 3.68 MM THK (Sch. 40S) X 5000-7000 MM LENGTH HEAT NO. ..... WSSL-01 PO NO. 00000174 S

LA - LADLE ANALYSIS, PA - PRODUCT ANALYSIS, VDI - VISUAL & DIMENTIONAL INSPECTION, PMI - POSITIVE MATERIAL IDENTIFICATION, TC - TEST CERTIFICATE , TDC - TECHNICAL DELIVERY CONDITIONS, WSSL - WELSPUN SPECIALTY SOLUTIONS LIMITED.

Overall liability of WSSL is limited to the value of the defective material supplied to proven evidence of manufacturing defects only & not application failure/misuse.

Material Produced & Supplied is Free From any major Harmful Mercury or other Radioactive Contamination.

Duplication / Forged Photocopy / Unauthorised Usage of any documentary property of WSSL is a punishable criminal act & subject to Law of Indian Jurisdiction.

Insist on Authentically Sealed Certificate
(Photocopy Invalid)

We Certify that the Material Herein Described Have Been Manufactured & Tested in Accordance to Relevant Specifications & the Results remain in accordance to the Provisions of the Order.

Prepared By
Engineer-QA/QC

Authorised By
Head - QA/QC

ROSETTI MARINO
Supply Management Dept.
Witness Review

raccortubi Heat num. or Pcs. marking: 235632 - Qty:62.08
Customer: ROSETTI MARINO S.p.A.
Description: 60.33x2.77 SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 70 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC2024000004640 * CERTIFIED TRUE COPY * Issued 22-05-2024
CTCERT2024000002492.1.0001

Welspun SPECIALTY SOLUTIONS

Alloy & Stainless | Bars & Tubes

Plot No. 1, G.I.D.C Industrial Estate, Jhagadia-Valia Road, Jhagadia, Dist. -Bharuch- 393 110, Gujarat, India. (Tel.) - +91-70690 05579, (Website) - www.welspunspecialty.com
Manufacturer of Stainless Steel Seamless Pipes , Tubes & U Tubes

Manufacturer's Mark | QR Code | Client / TPI Mark

MATERIAL TEST CERTIFICATE

FORMAT NO.- QMS-QA/QC-F-42, REV. NO. & DATE : 02, 19.08.2019

Customer	M/s. RACCORTUBI S.p.A	Customer PO No.	00000060 S_Rev.01	Date	07.11.2023
	Viale De Gasperi 194, 20010 Marcallo con Casone, Milano Italy	SO No.	4120000280	Date	-
MTC Type	EN 10204 Type 3.1 & PED 2014/68/EU	MTC No.	WSSL/SP-316L/0951/1223	Date	31.12.2023
Project Details	—				

Material Description	AUSTENITIC STAINLESS STEEL COLD FINISHED (CFD) SEAMLESS PIPES, PLAIN END	Specs & Grades	ASTM A-312 Ed-2021 TP316/TP316L, ASME Sec. II Part "A" SA-312 Ed-2021 TP316/TP316L, EN 10216-5 TC1 Ed. 2021 1.4401/1.4404, NACE MR 0175/ISO 15156-3 Ed. 2015 & MR0103/ISO 17495-1 Ed.2016 ANSI B36.19
Heat Treatment	SOLUTION ANNEALING AT 1060 ± 10°C TEMP. FOLLOWED BY WATER QUENCHING	Dimensions	ASTM/ASME-A/SA-312/999
		Approved QAP No	WSSL/QAP/051-1123 Rev.00 & Date 22.11.2023
		TDC Reference	Purchasing Specification RTX_SES Rev.5 Dtd. 13.09.2022
		Surface Condition	SOLUTION ANNEALED, PICKLED & PASSIVATED

Approved acc. to AD 2000 Merkblatt W0 and certified as per PED (2014/68/EU) Annex. I, Sec.4.3 by certification body for Pressure Equipment of TÜV SÜD Industrie Service GmbH (Reg. No.0036)

Chemical Composition in %

PO Sr. No.	Heat No.	OD (mm)	THK (mm)	Length (Mtr)	No. of Pcs.	Total Mtrs.	LA / PA	C	Si	Mn	P	S	Cr	Ni	Mo	Nb	Cu	N	PMI & VDI Check 100%
							Min	-	-	-	-	-	16.50	10.00	2.00	-	-	-	-
							Max	0.030	1.00	2.00	0.040	0.015	18.00	13.00	2.50	-	-	0.10	-
							LA	0.020	0.26	1.51	0.036	0.009	16.83	10.09	2.02	-	-	0.0920	-
19	235632	60.33	2.77	5.00 - 7.00	66	408.590	PA	0.020	0.246	1.504	0.035	0.009	16.818	10.083	2.014	-	-	0.0925	OK

Mandatory & Supplementary Test Conformity

PO Sr. No.	Heat No.	OD (mm)	THK (mm)	Tensile Strength MPa	Yield Strength 0.2% offset MPa	Yield Strength 1% offset MPa	Elongation (%) (Gauge Length = 5.65 √(Area))	Hardness (HRB)	Drift Expanding Test	Flattening Test	Macro Test	IGC Test as per ASTM A262 Practice E	Hydro Test 100% (HOLDING TIME 5 SEC. Min., Chloride Content <25 ppm)	Ultrasonic Test	DPT
				515 - 690	min.=205	min.= 240	40% min.	99 HRB Max.		-	-				
19	235632	60.33	2.77	601.480	302.818	341.254	53.91	75-80	Satisfactory	Satisfactory	-	Satisfactory	OK (Test Pressure : 1400 PSI (g))	—	—
				616.923	311.094	350.572	46.94								

Remark / Spl. Note	STEEL MELTING PROCESS : I.F + A.O.D .
	SAMPLING OF TEST COUPONS AND MECHANICAL TESTING(TENSILE TEST, DRIFT EXPANDING TEST, FLATTENING TEST & HARDNESS) CARRIED OUT BY WSSL : FOUND SATISFACTORY.
	DIRECTION OF TENSILE SPECIMEN: LONGITUDINAL
	PRODUCT ANALYSIS & IGC TEST (ASTM A262 PRACTICE "E") CARRIED OUT BY WSSL : FOUND SATISFACTORY.
	100% HYDRO TEST CARRIED OUT BY WSSL : FOUND SATISFACTORY.
	100% VISUAL AND DIMENTIONS CHECKED BY WSSL : FOUND SATISFACTORY.
	100% POSITIVE MATERIAL IDENTIFICATION CARRIED OUT BY WSSL : FOUND SATISFACTORY.
	LAND OF MELTING -INDIA (WELSPUN SPECIALTY SOLUTIONS LTD- STEEL PLANT)HS CODE : 72042190
	BILLETS MANUFACTURER-INDIA (WELSPUN SPECIALTY SOLUTIONS- STEEL PLANT)HS CODE : 7218
	RAW MATERIAL HS CODE : 72221199
	AS PER NACE MR-0175/ISO 15156-3 / NACE MR 0103 / ISO 17945-3 HARDNESS REQ. 22 HRC MAX. (99 HRB APPROX.) : FOUND SATISFACTORY.
	PIPES/HOLLOW BARS (WELSPUN SPECIALTY SOLUTIONS- STEEL PLANT/PIPES PLANT) HS CODE : 73044100
	MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT.
Marking	(W) WSSL SMLS CFD PIPE ASTM/ASME-A/SA-312 / EN 10216-5 TC-1 TP 316/316L/1.4401/1.4404 60.33 MM OD X 2.77 MM THK X 5000 - 7000 MM LENGTH HEAT NO. 235632 WSSL-01 PO NO. 00000060 S

LA - LADLE ANALYSIS, P.A - PRODUCT ANALYSIS, VDI - VISUAL & DIMENTIONAL INSPECTION, PMI - POSITIVE MATERIAL IDENTIFICATION, TC - TEST CERTIFICATE , TDC - TECHNICAL DELIVERY CONDITIONS, WSSL - WELSPUN SPECIALTY SOLUTIONS LIMITED.

Overall liability of WSSL is limited to the value of the defective material supplied to proven evidence of manufacturing defects only & not application failure/misuse.

Material Produced & Supplied is Free From any major Harmful Mercury or other Radioactive Contamination.

Duplication / Forged Photocopy / Unauthorised Usage of any documentary property of WSSL is a punishable criminal act & subject to Law of Indian Jurisdiction.

Insist on Authentically Sealed Certificate
(Photocopy Invalid)

We Certify that the Material Herein Described Have Been Manufactured & Tested in accordance to the above Specification & the Results comply in accordance to the Requisite of the Order.

Prepared By
Engineer-QA/QC

Authorized By
Head - QA/QC

WELSPUN SPECIALITY SOLUTIONS LTD. JHAGADIA

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

REGD. OFFICE :
'Suraj House',
Opp. Usmanpura Garden, Ashram Road,
Ahmedabad - 380 014. Gujarat (INDIA)
Tel. : 0091-79-2754 0720 / 2754 0721
Fax : 0091-79-2754 0722
Email : suraj@surajgroup.com

SURAJ LIMITED

(AN ISO 9001 : 2015 COMPANY)
(AN ISO 14001 : 2015 COMPANY)
(AN ISO 45001 : 2018 COMPANY)
(AN PED 2014/68/EU APPROVED COMPANY)

F / QA / 24 REV. NO. 10

WORKS :
Survey No. 779/A, Thol, Kadi - Sanand Highway,
Tal.-Kadi, Dist. Mehsana, Gujarat (India)
Tel. : (02764) 274216 / 27417 Fax : (02764) 274419
Email : quality@surajgroup.com
Visit us at www.surajgroup.com

INSPECTION CERTIFICATE

In Accordance with EN 10204/3.1

Customer: T.C No : 462 Date : 21.02.2024

Product : Austenitic S.S Seamless Cold Finish,Solution Annealed,Pickled & Passivated Pipes. P.O.No : 215941 Date : 26.10.2023

W.O.No : 2324/OEP400031 Date : 30.10.2023

Sr. No.	Specification	Grade	Heat No.	Dimensions		Quantity			Hydro Test Pressure(Psi)
				OD (MM)	THK (MM)	Length Mtr	Pcs.	Total Meter	
66	ASTM A-312 Ed.2021 SA-312 of ASME Sec.II Part "A" Ed.2021 EN 10216-5 TC1 NACE MR 0175/ISO 15156-3, NACE MR 0103	TP 316/316L 1.4401/ 1.4404	NJ113	114.30	3.05	RL	11	76.230	1000

Chemical Analysis %

Heat No.	Required	C	Mn	P	S	Si	Cr	Ni	Mo	N	Ti
	Min	--	--	--	--	--	16.50	10.00	2.00	--	--
	Max	0.030	2.00	0.040	0.015	1.00	18.00	13.00	2.50	0.100	--
NJ113	Heat Analysis	0.028	1.08	0.036	0.010	0.46	16.56	10.08	2.07	0.074	--
	Product Analysis	0.027	1.05	0.035	0.008	0.43	16.54	10.06	2.04	0.072	--

Mechanical Test

Heat No.	Required				Gauge Width	Flattening Test	Hardness Test	IGC Test
	Tensile strength Mpa	Yield strength Rp0.2% Mpa	Yield strength Rp 1 % Mpa	Elongation % GL 5.65√A				ASTM A-262 Practice"E"
MAX	690	--	--	--			Max-90 HRB	
MIN	515	205	240	40				
NJ113	616.89	314.20	332.81	54.61	25.40	Satisfactory	78-80	Satisfactory

Heat Treatment : Solution annealing conducted at 1045-1060°C temperature and rapid water quenching after final cold process.

Marking on pipes: SURAJ LTD ASTM/ASME A/SA-312 TP 316/316L __MM OD X ___ MM THK X RL SEAMLESS CFD EN 10216-5 TC1 1.4401/1.4404 HEAT NO.____ P O NO.____

Remarks:

* 100% Hydro test done at required pressure for 10 second holding time found satisfactory without any leakage.
* 100% Visual ,Dimensions (OD/THK/LENGTH) & Product Marking checked-satisfy the requirment of specification.
* 100% Positive Material Identification (PMI) done by SL & conforming to grade as per specification- found satisfactory.
* Intergranular Corrosion Test (IGC) Conducted as per ASTM A262 Pr"E"-No crack observed on bend portion at 20X - found satisfactory.
* Pickling and passivation conducted as per ASTM A-380.
* "Approved acc.to AD 2000-MERKBLATT W0 and certified acc.to PED (2014/68/EU) by certification body for pressure equipment of TUV NORD SYSTEMS (NOTIFIED BODY,REG NO.:0045)"
* Tensile test piece taken from the same lot as certified and tested in longitudinal direction.
* Melting process:EAF+AOD & Material is free of mercury & radioactive contamination.

" The material is manufactured in Suraj Ltd mill and is of India Origin. Material does not contain steel products originating in Russia mentioned The Russia (Sanctions (EU Exit) (Amendment) Regulations 2023 Regulation 46IA and 46IB and Annex XVII to the (EU) Regulation No 833/2014 and further amendment."

For Suraj Limited
SURAJ LTD THOL SL-1
C.I.Nayak
Dept.Head Quality

Prepared by

TD100422318

We hereby certify that the mater... Tipo:Certificati di origine ...he specification and results comply with the requirements of the purchase order.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

REGD. OFFICE :
'Suraj House',
Opp. Usmanpura Garden, Ashram Road,
Ahmedabad - 380 014. Gujarat (INDIA)
Tel. : 0091-79-2754 0720 / 2754 0721
Fax : 0091-79-2754 0722
Email : suraj@surajgroup.com

SURAJ LIMITED
(AN ISO 9001 : 2015 COMPANY)
(AN ISO 14001 : 2015 COMPANY)
(AN ISO 45001 : 2018 COMPANY)
(AN PED 2014/68/EU APPROVED COMPANY)

WORKS :
Survey No. 779/A, Thol, Kadi - Sanand Highway,
Tal.-Kadi, Dist. Mehsana, Gujarat (India)
Tel. : (02764) 274216 / 27417 Fax : (02764) 274419
Email : quality@surajgroup.com
Visit us at www.surajgroup.com

F / QA / 24 REV. NO. 10

INSPECTION CERTIFICATE

In Accordance with EN 10204/3.1

Customer: Commerciale Tubi Acciaio S.P.A. T.C No : 416 Date: 29.01.2024
Product : Austenitic S.S Seamless Cold Finish,Solution Annealed, Pickled & Passivated Pipes. P.O.No : OS-0000089 REV 0 Date: 30.10.2023
W.O.No : 2324/OEP400032 Date: 31.10.2023

Sr. No.	Specification	Grade	Heat No.	Dimensions		Quantity			Hydro Test Pressure (Psi)
				NPS	SCH	Length Mtr	Pcs	Total Meter	
23	ASTM A-312 Ed.2021 SA-312 of ASME Sec.II Part "A" Ed.2021 ASME B36.19, EN 10216-5 TC1 NACE MR 0175/ISO 15156, NACE MR 0103	TP 316/316L 1.4401/1.4404	NJ112	6	10S	RL	34	209.610	1000

Chemical Analysis %

Heat No.	Required	C	Mn	P	S	Si	Cr	Ni	Mo	N	Ti
	Min	--	--	--	--	--	16.50	10.00	2.00	--	--
	Max	0.030	2.00	0.040	0.015	1.00	18.00	13.00	2.50	0.100	--
NJ112	Heat Analysis	0.027	1.07	0.038	0.010	0.45	16.59	10.08	2.06	0.073	--

Mechanical Test

Heat No.	Required					Gauge Width	Flattening Test	Hardness Test	Impact Test	IGC Test
	Tensile Strength Mpa	Yield Strength		Elongation %						
		Rp0.2% Mpa	Rp 1 % Mpa	GL 50 mm	GL 5.65√A					ASTM A-262 Practice"E" & ISO 3651-2 Method "A"
MAX	690	--	--	--	--			Max-90 HRB	100 Joule Min.(AVG)	
MIN	515	205	240	53	53					
NJ112	614.55	311.29	325.10	55.62	55.49	25.40	Satisfactory	77-79	N/A	Satisfactory

Heat Treatment : Solution annealing conducted at 1045-1060°C temperature and rapid water quenching after final cold process.

Marking on pipes: SURAJ LTD SPECIFICATION GRADE SIZE
CFD EN 10216-5 TC1 EN GRADE HEAT NO._____P O NO.____

Remarks:

- 100% Hydro test done at required pressure for 10 second holding time found satisfactory without any leakage.
- 100% Visual, Dimensions(OD/THK/LENGTH) & Product Marking checked-satisfy the requirment of specification.
- 100% Positive Material Identification (PMI) done by SL & conforming to grade as per specification.
- Intergranular Corrosion Test (IGC) Conducted as per ASTM A262 Pr"E" & ISO 3651-2 method-A-No crack observed on bend portion at 20X.
- Pickling and Passivation Conducted as per ASTM A-380.
- "Approved acc.to AD 2000-MERKBLATT W0 and certified acc.to PED (2014/68/EU) by certification body for pressure equipment of TUV NORD SYSTEMS (NOTIFIED BODY,REG NO.:0045)"
- Tensile test piece taken from the same lot as certified and tested in longitudinal direction.
- Melting process:EAF+AOD & Material is free of mercury & radioactive contamination.
- " The material is manufactured in Suraj Ltd mill and is of India Origin. Material does not contain steel products originating in Russia mentioned The Russia (Sanctions (EU Exit) (Amendment) Regulations 2023 Regulation 46(A) and (B) and Annex XVII to the (EU) Regulation No 833/2014 and further amendment."

For, Suraj Limited.

Prepared by

C.I.Nayak
Dept.Head Quality

We hereby certify that the material described herein are in accordance with the specification and results comply with the requirements of the purchase order.

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ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Description: 21.34x2.77 SEAMLESS

Heat num. or Pcs. marking: CH-19563 - Qty:5.98

Order: 1724000839 - 22.04.24 - Item n.: 110 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY * Issued 22-05-2024

CTCERT202300003988.1.0001

CHANDAN STEEL LIMITED

CHANDAN MANNESMANN

DIN EN ISO 9001:2015 & Certificate Registration No. : 04 100 011022, Valid Until : 23.05.2025

CHANDAN MANNESMANN

INSPECTION CERTIFICATE (EN 10204 / 3.1)

CUSTOMER	: RACCORTUBI S.P.A.	T.C. NO.	: CSL/2023-24/QC/0326
P.O. NO.	: 00000114S	T.C. DATE	: 22/07/2023
PO. Date:	: 04.05.2023	W.O. NO.	: ESC/23-24/0019
PRODUCT	: COLD FINISHED SEAMLESS AUSTENITIC STAINLESS STEEL PIPES, CFD	W.O. DATE	: 08.05.2023
SPECIFICATION	: ASTM A312-22,ASTM A999-18, ASME SA 312 Ed. 2021, ASME SA999-2021, EN 10216-5 TC1 ED.2021, NACE MR 0175/ISO 15156 ED.2021,MR0103 ED.2015, & DIMENSION AS PER ANSI B36.19		
GRADE	: TP 316/316L / 1.4401/1.4404	PO SPECIFICATION:	RTX_SES Rev.05
REF.	: As per QAP NO. : QAP/SMLS/012/23-24 , Date: 09/05/2023		

UNIT : SEAMLESS TUBE DIVISION
Plot 142, New G.I.D.C. Expansion,
Umbergaon, Dist.-Valsad,
Gujarat - 396 171, INDIA.

Tel. No. +91 260 3089 850

Fax No. +91 260 3089 872

quality.smls@chandansteel.net
exports.smls@chandansteel.net

MANUFACTURING PROCESS OF STEEL :- ELECTRIC MELTING/A.O.D. REFINING /FULLY KILLED CONTINUOUS CASTING.

PO Item No	SIZE					HEAT NO.	QUANTITY		HYDROSTATIC TEST PRESSURE (Psi)	FLR	DET	FLT	PMI TEST	VDI	END FINISH	DELIVERY CONDITION
	OD		THICKNESS		LENGTH		PCS	TOTAL MTRS								
	IN MM	NPS	IN MM	SCH	IN MM											
9	21.34	1/2"	2.77	40S	5000-6000	CH-19563	91	500.000	2500	-	S.A.	S.A.	S.A.	S.A.	P.E.	CFD

PO Item No	HEAT NO.		CHEMICAL COMPOSITION %												
			C	Mn	P	S	Si	Cr	Ni	Mo	N_2	Cu	Ti	-	-
	REQ. (MAX.)		0.030	2.00	0.040	0.015	1.00	18.00	13.00	2.50	0.100	-	-	-	-
	REQ. (MIN.)		-	-	-	-	-	16.50	10.00	2.00	-	-	-	-	-
9	CH-19563	H	0.021	1.85	0.040	0.011	0.44	17.15	10.10	2.07	0.055	-	-	-	-
	CH-19563	P	0.022	1.87	0.038	0.013	0.42	17.19	10.09	2.08	0.057	-	-	-	-

PO Item No	MECHANICAL PROPERTIES													METALLURGICAL TESTS
	Y.S. (Rp0.2%) (N/mm2)	Y.S. (Rp0.1%) (N/mm2)	T.S. (N/mm2)	ELONG. % Min		HARDNESS IN HRB	WIDTH OF G.L. (mm)	DIRECTION OF SPEC.	Type of Specimen	IMPACT TEST (at RT).(In KV_c)				MICRO STRUCTURE / GRAIN SIZE
				(G.L.= 5.65√A	(G.L. = 50mm)					1	2	3	Avg.	
Req. Max	-	-	690	-	-	100 (22 HRC)	-	-	-	-			-	-
Req. Min	205	240	515	40	35	-	-	-	-	-			-	-
9	281.31	307.22	608.28	56.64	58.15	74 - 75	-	Long	FULL SIZE	-	-	-	-	-
	290.00	314.50	616.28	55.10	56.33	73 - 75	-	Long	FULL SIZE	-	-	-	-	-

HEAT TREATMENT : Solution Annealed at 1060 °C ± 20°C temperature followed by rapid Water Quenching.

REMARKS
1 : 100% Hydrostatic Test carried out by CSL - Found Satisfactory.
2 : 100% Visual & Dimension Checked by CSL - Found Satisfactory.
3 : 100% PMI Checked by CSL - Found Satisfactory.
4 : 100% Marking done by CSL - Found Satisfactory.
5 : IGC Test as per ASTM A262 Practice "E" & EN ISO 3651-2 Method -'A' done by CSL - Found Satisfactory.
6 : Product analysis carried out by CSL - Found Satisfactory.
7 : Mechanical Test (Tensile Test, Flattening Test, Drift Expanding and Hardness Test) done by CSL - Found Satisfactory.
8 : Material is free from radio-active & mercury contamination.
9 : Pickling and Passivation carried out as per ASTM A 380 - Found Satisfactory.
10 : Reference Material According to PED 2014/68/EU.
APPROVED ACC. TO PED (2014/68/EU) BY CERTIFICATION BODY FOR PRESSURE EQUIPMENT OF TUV NORD SYSTEMS (NOTIFIED BODY, REG. NO. 0045).

MARKING (BY INKJET M/C.) : CHANDAN MANNESMANN S.S. SMLS COLD FINISHED PIPE (CFD) ASTM A312/ASME SA312 EN10216-5 TC1(VSJ) GRADE — — MM OD X— MM THK. X 5000 - 6000 MM R/L HEAT NO. — P.O.NO.—

It is hereby certified that the above results are true and correct in every details and are meeting the requirements of specification & purchase order.

LEGENDS: H = HEAT ANALYSIS, P = PRODUCT ANALYSIS, S.A. = SATISFACTORY, N.A. = NOT APPLICABLE, LONG.= LONGITUDINAL, FLR-FLARING TEST, FLT-FLATENING TEST, ECT- EDDY CURRENT TEST, VDI-VISUAL & DIMENSIONAL INSPECTION, G.L.= GAUGE LENGTH, P.E.-PLAIN END, B.E.-BEVEL END, CFD- COLD FINISHED DESCALED, RED. SPEC- REDUCED SPECIEMEN, DET-DRIFT EXPANDING TEST

CHANDAN STEEL LIMITED WORKS INSPECTOR V.S.J.

CHANDAN STEEL LIMITED QA SEAMLESS TUBE DIVISION

FOR, CHANDAN STEEL LIMITED. (S.T.D.)

Mr. Jaydip Rathod - Engineer QA/QC

FOR, CHANDAN STEEL LIMITED. (S.T.D.)

Mr. Vaibhav Joshi - DGM QA/QC

Format. No.: F860 QC 51 / Rev.00 / Date of Issue: 11/01/2018

ROSETTI MARINO
Supply Management Dept
Witness

1/3 Page

TTP
TUBACEX GROUP

INSPECTION CERTIFICATE
EN 10204:2004 / 3.1

Number: TTP/MTC-2023/1891 Rev: 00

Created On: Modified On:

Date: 06-Aug-2023

TUBACEX TUBES AND PIPES PVT. LTD.

Survey No. 131/1, Umbergaon-Sanjan Road, Umbergaon-396 171, Dist-Valsad, Gujrat, India

TEL: +91 260 6616240

EMAIL: quality@tubacexindia.com

CUSTOMER DESCRIPTION

CLIENT SOLD TO	CLIENT SHIP TO
M/s TUBACEX SERVICE SOLUTIONS S.A.U	

CLIENT ORDER : 508473 **DATE :** 11-May-2023

SALES ORDER : 1202237

MATERIAL: SEAMLESS STAINLESS STEEL PIPES
COLD FINISHED & HEAT-TREATED. PICKLED & PASSIVATED ACC. TO ASTM A380.
GRADE: TP 316/316L/1.4401/1.4404
STANDARD: ASME SEC.II PART-A SA 312/312M-2021 ED.
ASTM A 312/A 312M-21(ED.2022)
EN 10216-5:2021-06 TC1
NACE MR0103:2015
NACE MR0175/EN ISO 15156: 2015
CHECK ANALYSIS
CORR. TESTED ACC. TO ASTM A262 PRACTICE 'E'
HYDROTEST: ASTM A999 / A999M & EN 10216 - 5
TOLERANCES : ASME SECT.II PART.A SA999/SA999M
EN ISO 1127:1997 D3/T3 & ASTM A999/A999M
LENGTHS: 6-7 M / PLAIN ENDS
DIMENSIONS: 26.67 MM OD X 2.87 MM THK - 3/4" X SCH 40S

Sales Item	Client Item	Delivery No.	Bundle No.	Heat No.	Pieces	Weight	Tot Lgth	
360	360	256	C2306631	A-6925	92	1039.00	622.725	M

RAW MATERIAL

Heat No	Method
A-6925	IF/AOD/CCP(EMS)/HR

CHEMICAL COMPOSITION (%) *L: Ladle C: Products

Heat No	Sample		C	Mn	Si	P	S	Ni	Cr	Mo	N
		MAX	0.030	2.00	1.00	0.040	0.015	13.00	18.00	2.50	0.10
		MIN						10.00	16.50	2.00	
A-6925		L	0.023	1.61	0.37	0.039	0.009	10.06	16.70	2.02	0.079
A-6925	1	C	0.022	1.58	0.35	0.036	0.008	10.09	16.66	2.06	0.075

Certified Management System acc. To ISO 9001, ISO 14001, and ISO 45001 by TUV-NORD.

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies orders requirements. This certificate is issued by a computerized system, and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

TUBACEX TUBES AND PIPES PVT. LTD.

SUBODH PATRA
DY. MANAGER (QA/QC)

Form No.: F/QCD/035 Rev. 00 Date: 01.01.2022

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

TTP
TUBACEX GROUP

INSPECTION CERTIFICATE
EN 10204:2004 / 3.1

Number: TTP/MTC-2023/1891 Rev: 00
Page 2 of 3

Created On: Modified On:
Date: 06-Aug-2023

HEAT TREATMENT

SOLUTION ANNEALED AT 1040° C MIN, FOLLOWED BY WATER QUENCHING

TENSILE TEST : ACCORDING TO ASTM A 370/ EN ISO 6892-1

Heat No	Sample		Temp	YS	Rp0.2	UTS	A2"	A5	Type	Spc. Type	Spc. Dim
		UNIT	°C	MPa	MPa	MPa	%	%			mm
		MAX				690					
		MIN		205	205	515	35	40			
A-6925	1		RT	305.07	290.93	596.14	58.50	60.78	L	F	26.71

HARDNESS TEST : ACCORDING TO ASTM A 370 / NACE MR 0175 & NACE MR 0103

Heat No	Sample		H1	H2
		UNIT	HRB	HRB
		MAX	90	90
		MIN		
A-6925	1		77	79

METALLURGICAL TESTS

MICROSTRUCTURE ACC. ASTM E 112 GRAIN SIZE 5-6 MATERIALS FREE FROM CARBIDE PRECIPITATION.
UNIFORM AUSTENITIC STRUCTURE ACROSS FULL WALL THICKNESS.

INTRAGRANULAR CORROSION TEST CARRIED OUT ACC. TO ASTM A 262 PR.'E'. AT 20X MAGNIFICATION NO CRACKS OR FISSURES OBSERVED ON BENT SPECIMEN. MICRO EXAMINATION CARRIED OUT AT 250X MAGNIFICATION NO GRAIN DROPPING OBSERVED: SATISFACTORY.

NON-DESTRUCTIVE TESTS

POSITIVE MATERIAL IDENTIFICATION TEST CARRIED OUT ON EACH PIPE BY "X-RAY-FLUORESCENCE-ANALYZER" (TARGET ELEMENTS Cr, Ni & Mo) : SATISFACTORY.

HYDROSTATIC PRESSURE TEST CARRIED OUT ON EACH PIPE FOR DURATION OF 10 SEC AT PRESSURE OF 2500 PSI : NO LEAKAGE & NO PRESURE DROP OBSERVED - SATISFACTORY.

CHLORIDE CONTENT OF WATER USED FOR HYDROSTATIC TEST < 20 PPM & DRYING WITH COMPRESSED AIR.

DIMENSIONAL CHECKING ON EACH PIPE: SATISFACTORY
VISUAL INSPECTION ON EACH PIPE: SATISFACTORY

TECHNOLOGICAL TESTS

FLATTENING TEST: SATISFACTORY

DRIFT EXPANDING TEST: SATISFACTORY

MARKING

ALTX/TBX/CFD/ SEAMLESS PIPE 26.67 MM OD X 2.87 MM THK X 3/4'' - SCH 40S X 6-7 MTR LONG / ASTM ASME A/SA 312M EN10216 - 5 TC1 / TP 316/316L/1.4401/1.4404 / HEAT NO A-6925 / B.NO C2306631 / NACE MR0175/MR0103/ MADE IN INDIA

Certified Management System acc. To ISO 9001, ISO 14001, and ISO 45001 by TUV-NORD.

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies orders requirements. This certificate is issued by a computerized system, and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

TUBACEX TUBES AND PIPES PVT. LTD.

SUBODH PATRA
DY. MANAGER (QA/QC)

Form No.: F/QCD/035 Rev. 00 Date: 01.01.2022

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 26.67x2.87 SEAMLESS

raccortubi Heat num. or Pcs. marking: A-6925 - Qty:6,88

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

TTP
TUBACEX GROUP

INSPECTION CERTIFICATE
EN 10204:2004 / 3.1

Number: TTP/MTC-2023/1891 Rev: 00

Created On: Modified On:

Date: 06-Aug-2023

PMI-AV (TTP-2)

REMARKS

NO MERCURY, MERCURY COMPOUNDS OR MERCURY BEARING INSTRUMENTS AND/OR EQUIPMENT HAVE BEEN USED ALONG MANUFACTURING AND INSPECTION PROCESS.

NO WELDING OR WELD REPAIRS WERE MADE.

MATERIAL IS FREE OF RADIATION CONTAMINATION.

WE HEREBY CONFORM THAT WE ARE CERTIFIED BY TUV RHEINLAND INDUSTRIE SERVICE GmbH AS NOTIFIED BODY(0035) TO ISSUE CERTIFICATES OF SPECIFIC PRODUCT CONTROL IN ACCORDANCE TO PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU ANNEX 1 POINT 4.3 & AD 2000-NO.PED 2014/68/EU CERTIFICATE NO.: 01 202 IND/Q-15- 0036 VALID UNTILL DECEMBER 31, 2024.

MATERIAL CHARACTERISTIC COMPLY WITH POINT 7.5 OF ANNEX 1 TO PED BY HAVING AN ELONGATION AFTER RUPTURE AT TENSILE TEST NO LESS THAN 14% AND A BENDING RUPTURE ENERGY AT IMPACT TEST NO LESS THAN 27J AT 20° C

ABBREVIATIONS

YS-YIELD STRESS, UTS-ULTIMATE TENSILE STRESS, A2-GAUGE LENGTH (2 INCH), A5-GAUGE LENGTH 5.65√S•, RT-ROOM TEMPERATURE, T-TRANSVERSE, L-LONGITUDINAL, R-REDUCED SECTION, F-FULL SECTION, R/L-RANDOM LENGTH, SPC-SPECIEMEN, M-METER, OD- OUTSIDE DIAMETER, WT- WALL THICKNESS, H-HARDNESS, TTP - TUBACEX TUBES AND PIPES PVT LTD.

Certified Management System acc. To ISO 9001, ISO 14001, and ISO 45001 by TUV-NORD.

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies orders requirements. This certificate is issued by a computerized system, and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

TUBACEX TUBES AND PIPES PVT. LTD.

SUBODH PATRA
DY. MANAGER (QA/QC)

Form No.: F/QCD/035 Rev. 00 Date: 01.01.2022

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: 26.67x2.87 SEAMLESS

raccortubi Heat num. or Pcs. marking: A-6925 - Qty:6,88

Protocol: CTCERC202400004640 * CERTIFIED TRUE COPY
* Issued 22-05-2024

raccortubi

00004695

30/05/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

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Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
170	NR	1	0,00	CAPS 1.1/2" SCH.40/S	1016SA019
				RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
180	NR	2	0,00	CAPS 10" SCH.10/S	51856
190	NR	4	0,00	CAPS 1" SCH.40/S	519724
200	NR	10	0,00	CAPS 1.1/2" SCH.40/S	1014684
210	NR	3	0,00	CURVE 45° LR 2" SCH.10/S SEAMLESS	M230405
220	NR	1	0,00	CURVE 45° LR 4" SCH.10/S SEAMLESS	LN008-1
230	NR	5	0,00	CURVE 45° LR 1" SCH.40/S SEAMLESS	E62123

raccortubi

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30/05/2024

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Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

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Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
240	NR	18	0,00	CURVE 90° LR 1" SCH.40/S SEAMLESS	1035SA022
250	NR	22	0,00	CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS	1023SA024
				RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
260	NR	14	0,00	CURVE 90° LR 2" SCH.10/S SEAMLESS	M230234-1
260	NR	15	0,00	CURVE 90° LR 2" SCH.10/S SEAMLESS	1482623
270	NR	175	0,00	CURVE 90° LR 1" SCH.40/S SEAMLESS	M230689
270	NR	45	0,00	CURVE 90° LR 1" SCH.40/S SEAMLESS	1519623
290	NR	56	0,00	CURVE 90° LR 4" SCH.10/S SEAMLESS	M230735
300	NR	24	0,00	CURVE 90° LR 6" SCH.10/S SEAMLESS	GTA070-01-103LR

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00004695

30/05/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

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Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
310	NR	12	0,00	CURVE 90° LR 10" SCH.10/S SEAMLESS	M230630
				RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
320	NR	2	0,00	RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS	1018SA019
				RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
330	NR	1	0,00	RID. CONC. 4"x3" SCH.10/S SEAMLESS	ECC26
340	NR	14	0,00	RID. CONC. 1"x1/2" SCH.40/S SEAMLESS	MR230847
350	NR	15	0,00	RID. CONC. 1"x3/4" SCH.40/S SEAMLESS	MR230609
380	NR	1	0,00	RID. CONC. 4"x2" SCH.10/S SEAMLESS	J0043-1
390	NR	12	0,00	RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS	1163621

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30/05/2024

CERTIFICATO DI CONFORMITA'
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Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

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Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
410	NR	1	0,00	RID. CONC. 2"x1.1/4" SCH.10/S SEAMLESS	MR211002
430	NR	1	0,00	RID. ECC. 6"x4" SCH.10/S SEAMLESS	HTA077-04-103ER
440	NR	1	0,00	RID. ECC. 4"x2" SCH.10/S SEAMLESS	YX1906-526
440	NR	5	0,00	RID. ECC. 4"x2" SCH.10/S SEAMLESS	MR230757
				RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
450	NR	4	0,00	TEE UG. 1.1/2" SCH.40/S SEAMLESS	1157SA019
				RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
460	NR	3	0,00	TEE UG. 2" SCH.10/S SEAMLESS	MT220055
470	NR	6	0,00	TEE UG. 4" SCH.10/S SEAMLESS	LN008-1
480	NR	30	0,00	TEE UG. 1" SCH.40/S SEAMLESS	66A-SWJ011

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30/05/2024

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Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

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Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
490	NR	10	0,00	TEE UG. 1.1/2" SCH.40/S SEAMLESS	66HSWJ128
500	NR	2	0,00	TEE UG. 10" SCH.10/S SEAMLESS	INA004-03-103T
				RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
510	NR	5	0,00	TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS	1181SA05
520	NR	7	0,00	TEE RID. 1.1/2"x1" SCH.40/S SEAMLESS	1005SA022
530	NR	1	0,00	TEE RID. 4"x1.1/2" SCH.10S/40S SEAMLESS	1101SA02
				RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
540	NR	6	0,00	TEE RID. 6"x4" SCH.10/S SEAMLESS	LN011-1
550	NR	6	0,00	TEE RID. 4"x3" SCH.10/S SEAMLESS	MN036-1
610	NR	5	0,00	TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS	12B258

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30/05/2024

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Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

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Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
630	NR	5	0,00	CURVE 45° LR 3/4" SCH.40/S SEAMLESS	LD230511-04
650	NR	1	0,00	RID. CONC. 3/4"x1/2" SCH.40/S SEAMLESS	LD230511-04

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

ITALTEST NDT
CONTROLLI E COLLAUDI INDUSTRIALI
SETTIMO MILANESE – LEGNANO (MI) www.italtest.it

RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI
LIQUID PENETRANT TEST REPORT

dal 1965
CERT. ISO 9001 LRC0100763/QMS

N° 4.128 / 2024

PAGINA DI PAGINE
Page 1 of 2 Pages

CLIENTE / Customer: RACCORTUBI S.p.A.	ORDINE / Order: 1724000839 - 22.04.2024	COMMESSA / Job: 00002010

OGGETTO / Object: SEE PAGE 2

SPECIFICA GENERALE / General specification	PIANO DI CONTROLLO / Control Plan	FASE / Phase	CRITERIO D'ACCETTAZIONE / Acceptance Standards
ASTM SE 165			ASME VIII DIV.1 APP.8
PROCEDURA / Procedure	**MATERIALE / Material**	**DISEGNO / Drawing — FIG. / Fig.**	**% CONTROLLATA / Extent %**
	SEE PAGE 2		100% SURFACE

CONDIZIONE SUPERFICE / Surface Conditions	SALDATO / As Welded	MOLATO / Ground	LAVORATO / Machined	FORGIATO / As Forged	FUSO / As Cast
				X	

STATO DEL MATERIALE / Material Status	PRIMA DEL T.T. / Before Heat Treatment	DOPO T.T. / After Heat Treatment	DOPO RIPARAZIONE / After Repair

DATI DELLA PROVA / Test Data

METODO DI PULIZIA / Precleaning Method: SOLVENT AND PAPER

TECNICA / Technique		
	CONTRASTO DI COLORE / Color Contrasting: X	FLUORESCENTE / Fluorescent:
	ILLUMINAZIONE / White Light Intensity: 1200 lx	ILLUMINAZIONE / Black Light Intensity:

METODO DI ISPEZIONE / Liquid Penetrant Inspection Method

MARCA / Brand	TIPO / Type	PENETRANTE / Penetrant		LOTTO / Batch	SCADENZA / Expiry
N.D.T.	LAVABILE IN ACQUA / Water Washable: X		SPRAY / Spray: X	210115Ps	02/2025
			PENNELLO / Brush:		
	POST EMULSIONABILE / Post Emulsifiable:	RIVELATORE / Developer	SECCO / Dry:		
	RIMOVIBILE CON SOLVENTE / Solvent Removable:		UMIDO / Wet: X	230206W150s	01/2027

TEMPO DI PENETRAZIONE / Dwell Time	METODO DI PULIZIA / Cleaning Method
20 MINUTE	WATER AND PAPER
TEMPO DI SVILUPPO / Developing Time	**METODO DI PULIZIA / Cleaning Method**
10 MINUTE	WATER AND PAPER

RISULTATI DELLA PROVA / Test Results

SENZA DIFETTI / No Defects	DIFETTI ACCETTABILI / Accettable Defects	DIFETTI NON ACCETTABILI / Unaccepptable Defects
X		

OSSERVAZIONI O DESCRIZIONE DELLE INDICAZIONI / Description Of Defects, Size And Location

RISULTATI / Results	CONFORME ALLA SPECIFICA / According To Specification	NON CONFORME ALLA SPECIFICA / Not According To Specification	SCARTO / Scrap
	X		

NOTE / Notes:

PROVA EFFETTUATA PRESSO / Test Carried Out At: WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE / Technician	RAPPRESENTANTE DEL CLIENTE / Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO / 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT	ROSETTI MARINO *Supply Management Dept.*	
DATA / Date: 27 / 05 / 2024	DATA / Date: ☐ Witness ☐ Review	DATA / Date:

ITALTEST NDT

CONTROLLI E COLLAUDI INDUSTRIALI
SETTIMO MILANESE – LEGNANO (MI) www.italtest.it

RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI

LIQUID PENETRANT TEST REPORT

50 dal 1965
CERT. ISO 9001 LRC0100763/QMS

N° 4.128 / 2024

PAGINA DI PAGINE
Page 2 of 2 Pages

CLIENTE Customer	ORDINE Order	COMMESSA Job
RACCORTUBI S.p.A.	1724000839 - 22.04.2024	00002010

ITEM Item	Q.TÀ Q.ty	DESCRIZIONE Description	MATERIALE Material	COLATA Heat
170	1	CAPS. 1 ½" SCH.40/S	ASTM /ASME SA/A-815 UNS S32760 DIM. ASME B16.9/16./25	1016SA019
240	18	ELBOWS 90° LR 1" SCH.40/S SEAMLESS	ASTM /ASME SA/A-815 UNS S32760 DIM. ASME B16.9/16./25	1035SA022
250	22	ELBOWS 90° LR 1 ½" SCH.40/S SEAMLESS	ASTM /ASME SA/A-815 UNS S32760 DIM. ASME B16.9/16./25	1023SA024
320	2	CONC. REDS. 2" x 1 ½" SCH.10S/40/S SEAMLESS	ASTM /ASME SA/A-815 UNS S32760 DIM. ASME B16.9/16./25	1018SA019
450	4	TEES 1 ½" SCH.40/S SEAMLESS	ASTM /ASME SA/A-815 UNS S32760 DIM. ASME B16.9/16./25	1157SA019
510	5	RED. TEES 1 ½" x ¾" SCH.40/S SEAMLESS	ASTM /ASME SA/A-815 UNS S32760 DIM. ASME B16.9/16./25	1181SA05
520	7	RED. TEES 1 ½" x 1" SCH.40/S SEAMLESS	ASTM /ASME SA/A-815 UNS S32760 DIM. ASME B16.9/16./25	1005SA022
530	1	RED. TEES 4" x 1 ½" SCH.10S/40S SEAMLESS	ASTM /ASME SA/A-815 UNS S32760 DIM. ASME B16.9/16./25	1101SA02
-	-	-	-	-

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT DATA Date 27 / 05 / 2024	ROSETTI MARINO Supply Management Dept ☐ Witness ☑ Review DATA Date	DATA Date

ITALTEST NDT CONTROLLI E COLLAUDI INDUSTRIALI SETTIMO MILANESE – LEGNANO (MI) www.italtest.it	RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI LIQUID PENETRANT TEST REPORT	50 dal 1965 CERT. ISO 9001 LRC0100763/QMS	N° 4.129 / 2024 PAGINA DI PAGINE Page 1 of 3 Pages

CLIENTE Customer	RACCORTUBI S.p.A.	ORDINE Order	1724000839 - 22.04.2024	COMMESSA Job	00002010

OGGETTO
Object: SEE PAGE 2

SPECIFICA GENERALE General specification	PIANO DI CONTROLLO Control Plan	FASE Phase	CRITERIO D'ACCETTAZIONE Acceptance Standards
ASTM SE 165			ASME VIII DIV.1 APP.8

PROCEDURA Procedure	MATERIALE Material	DISEGNO FIG. Drawing Fig.	% CONTROLLATA Extent %
	SEE PAGE 2		100% SURFACE

CONDIZIONE SUPERFICE Surface Conditions	SALDATO As Welded	MOLATO Ground	LAVORATO Machined	FORGIATO As Forged X	FUSO As Cast

STATO DEL MATERIALE Material Status	PRIMA DEL T.T. Before Heat Treatment	DOPO T.T. After Heat Treatment	DOPO RIPARAZIONE After Repair

DATI DELLA PROVA
Test Data

METODO DI PULIZIA
Precleaning Method: SOLVENT AND PAPER

TECNICA Technique	CONTRASTO DI COLORE Color Contrasting X	FLUORESCENTE Fluorescent
	ILLUMINAZIONE White Light Intensity 1200 lx	ILLUMINAZIONE Black Light Intensity

METODO DI ISPEZIONE Liquid Penetrant Inspection Method						
MARCA Brand N.D.T.		PENETRANTE Penetrant	SPRAY Spray X	LOTTO Batch 210115Ps	SCADENZA Expiry 02/2025
TIPO Type	LAVABILE IN ACQUA Water Washable X		PENNELLO Brush	LOTTO Batch	SCADENZA Expiry
	POST EMULSIONABILE Post Emulsifiable	RIVELATORE Developer	SECCO Dry	LOTTO Batch	SCADENZA Expiry
	RIMOVIBILE CON SOLVENTE Solvent Removable		UMIDO Wet X	LOTTO Batch 230206W150s	SCADENZA Expiry 01/2027

TEMPO DI PENETRAZIONE Dwell Time	20 MINUTE	METODO DI PULIZIA Cleaning Method	WATER AND PAPER
TEMPO DI SVILUPPO Developing Time	10 MINUTE	METODO DI PULIZIA Cleaning Method	WATER AND PAPER

RISULTATI DELLA PROVA
Test Results

SENZA DIFETTI No Defects X	DIFETTI ACCETTABILI Accettable Defects	DIFETTI NON ACCETTABILI Unaccepptable Defects

OSSERVAZIONI O DESCRIZIONE DELLE INDICAZIONI
Description Of Defects, Size And Location

RISULTATI Results	CONFORME ALLA SPECIFICA According To Specification X	NON CONFORME ALLA SPECIFICA Not According To Specification	SCARTO Scrap

NOTE
Notes

PROVA EFFETTUATA PRESSO
Test Carried Out At: WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 DATA Date 27 / 05 / 2024 RT	ROSETTI MARINO Supply Management Dept DATA ☐ Witness ☑ Review Date	DATA Date

ITALTEST NDT CONTROLLI E COLLAUDI INDUSTRIALI SETTIMO MILANESE – LEGNANO (MI) www.italtest.it	RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI LIQUID PENETRANT TEST REPORT	50 dal 1965 CERT. ISO 9001 LRC0100763/QMS	N° 4.129 / 2024 PAGINA DI PAGINE Page 2 of 3 Pages

CLIENTE Customer	RACCORTUBI S.p.A.	ORDINE Order	1724000839 - 22.04.2024	COMMESSA Job	00002010

ITEM Item	Q.TÀ Q.ty	DESCRIZIONE Description	MATERIALE Material	COLATA Heat
180	2	CAPS.10" SCH.10/S	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	51856
190	4	CAPS.1" SCH.40/S	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	519724
200	10	CAPS. 1 ½" SCH.40/S	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	1014684
210	3	ELBOWS 45° LR 2" SCH.10/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	M230405
220	1	ELBOW 45° LR 4" SCH.10/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	LN008-1
230	5	ELBOWS 45° LR 1" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	E62123
260	14	ELBOWS 90° LR 2" SCH.10/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	M230234-1
260	15	ELBOWS 90° LR 2" SCH.10/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	1482623
270	175	ELBOWS 90° LR 1" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	M230689
270	45	ELBOWS 90° LR 1" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	1519623
290	56	ELBOWS 90° LR 4" SCH.10/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	M230735
300	24	ELBOWS 90° LR 6" SCH.10/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	GTA070-01-103LR
310	12	ELBOWS 90° LR 10" SCH.10/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	M230630
330	1	CONC. RED. 4"x 3" SCH.10S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	ECC26
340	14	CONC. REDS. 1"x ½" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	MR230847
350	15	CONC. REDS. 1"x ¾" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	MR230609
380	1	CONC. RED. 4"x 2" SCH.10S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	J0043-1
390	12	CONC. REDS. 1 ½"x 1" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	1163621
410	1	CONC. RED. 2"x 1 ¼" SCH.10S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	MR211002
430	1	ECC. RED. 6"x 4" SCH.10S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	HTA077-04-103ER
440	1	ECC. RED. 4"x 2" SCH.10S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	YX1906-526
440	5	ECC. REDS. 4"x 2" SCH.10S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	MR230757
460	3	TEE 2" SCH.10/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	MT220055

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT DATA Date 27 / 05 / 2024	ROSETTI MARINO Supply Management Dept. ☐ Witness ☐ Review DATA Date	DATA Date

ITALTEST NDT CONTROLLI E COLLAUDI INDUSTRIALI SETTIMO MILANESE – LEGNANO (MI) www.italtest.it	RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI LIQUID PENETRANT TEST REPORT	dal 1965 CERT. ISO 9001 LRC0100763/QMS	N° 4.129 / 2024 PAGINA DI PAGINE Page 3 of 3 Pages

CLIENTE Customer	ORDINE Order	COMMESSA Job
RACCORTUBI S.p.A.	1724000839 - 22.04.2024	00002010

ITEM Item	Q.TÀ Q.ty	DESCRIZIONE Description	MATERIALE Material	COLATA Heat
470	6	TEES 4" SCH.10/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	LN008-1
480	30	TEES 1" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	66A-SWJ011
490	10	TEES 1 ½" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	66HSWJ128
500	2	TEES 10" SCH.10/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	INA004-03-103T
540	6	RED.TEES 6"x 4" SCH.10/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	LN011-1
550	6	RED.TEES 4"x 3" SCH.10/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	MN036-1
610	5	RED.TEES 1 ½"x ¾" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	12B258
630	5	ELBOWS 45° LR ¾" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	LD230511-04
650	1	CONC. RED. ¾"x ½" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	LD230511-04
-	-	-	-	-

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT DATA Date 27 / 05 / 2024	ROSETTI MARINO Supply Management Dept. DATA Date ☐ Witness ☒ Review	DATA Date

raccortubi

00004695

27/05/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	Q.ta' *Q.ty*	U.M.	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
			RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
170	1	NR	CAPS 1.1/2" SCH.40/S	1016SA019
			RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
180	2	NR	CAPS 10" SCH.10/S	51856
190	4	NR	CAPS 1" SCH.40/S	519724
200	10	NR	CAPS 1.1/2" SCH.40/S	1014684
210	3	NR	CURVE 45° LR 2" SCH.10/S SEAMLESS	M230405
220	1	NR	CURVE 45° LR 4" SCH.10/S SEAMLESS	LN008-1
230	5	NR	CURVE 45° LR 1" SCH.40/S SEAMLESS	E62123
			RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
240	18	NR	CURVE 90° LR 1" SCH.40/S SEAMLESS	1035SA022
250	22	NR	CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS	1023SA024

raccortubi

00004695

27/05/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

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Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	Q.ta' *Q.ty*	U.M.	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
			RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
260	14	NR	CURVE 90° LR 2" SCH.10/S SEAMLESS	M230234-1
260	15	NR	CURVE 90° LR 2" SCH.10/S SEAMLESS	1482623
270	45	NR	CURVE 90° LR 1" SCH.40/S SEAMLESS	1519623
270	175	NR	CURVE 90° LR 1" SCH.40/S SEAMLESS	M230689
290	56	NR	CURVE 90° LR 4" SCH.10/S SEAMLESS	M230735
300	24	NR	CURVE 90° LR 6" SCH.10/S SEAMLESS	GTA070-01-103LR
310	12	NR	CURVE 90° LR 10" SCH.10/S SEAMLESS	M230630
			RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
320	2	NR	RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS	1018SA019
			RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	

raccortubi

00004695

27/05/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	Q.ta' *Q.ty*	U.M.	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
330	1	NR	RID. CONC. 4"x3" SCH.10/S SEAMLESS	ECC26
340	14	NR	RID. CONC. 1"x1/2" SCH.40/S SEAMLESS	MR230847
350	15	NR	RID. CONC. 1"x3/4" SCH.40/S SEAMLESS	MR230609
380	1	NR	RID. CONC. 4"x2" SCH.10/S SEAMLESS	J0043-1
390	12	NR	RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS	1163621
410	1	NR	RID. CONC. 2"x1.1/4" SCH.10/S SEAMLESS	MR211002
430	1	NR	RID. ECC. 6"x4" SCH.10/S SEAMLESS	HTA077-04-103ER
440	5	NR	RID. ECC. 4"x2" SCH.10/S SEAMLESS	MR230757
440	1	NR	RID. ECC. 4"x2" SCH.10/S SEAMLESS	YX1906-526
			RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
450	4	NR	TEE UG. 1.1/2" SCH.40/S SEAMLESS	1157SA019
			RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	

raccortubi

00004695

27/05/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

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Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
460		3 NR	TEE UG. 2" SCH.10/S SEAMLESS	MT220055
470		6 NR	TEE UG. 4" SCH.10/S SEAMLESS	LN008-1
480		30 NR	TEE UG. 1" SCH.40/S SEAMLESS	66A-SWJ011
490		10 NR	TEE UG. 1.1/2" SCH.40/S SEAMLESS	66HSWJ128
500		2 NR	TEE UG. 10" SCH.10/S SEAMLESS	INA004-03-103T
			RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
510		5 NR	TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS	1181SA05
520		7 NR	TEE RID. 1.1/2"x1" SCH.40/S SEAMLESS	1005SA022
530		1 NR	TEE RID. 4"x1.1/2" SCH.10S/40S SEAMLESS	1101SA02
			RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
540		6 NR	TEE RID. 6"x4" SCH.10/S SEAMLESS	LN011-1
550		6 NR	TEE RID. 4"x3" SCH.10/S SEAMLESS	MN036-1

raccortubi

00004695

27/05/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
610	5	NR	TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS	12B258
630	5	NR	CURVE 45° LR 3/4" SCH.40/S SEAMLESS	LD230511-04
650	1	NR	RID. CONC. 3/4"x1/2" SCH.40/S SEAMLESS	LD230511-04

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

raccortubi Heat num. or Pcs. marking: 1016SA019 - Qty:1,00

Customer: ROSETTI MARINO S.p.A.

Description: CAPS 1.1/2" SCH.40/S

Order: 1724000839 - 22.04.24 - Item n.: 170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010

Protocol: CTCERC2024000004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5 - 29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente Customer/ RACCORTUBI S.p.A.

Ordine N. P.O.N./C.N. OF06523 del 27/11/2018

Pos. N. Item/Poste 8 **Q.tà** Q.ty/Q.té 450

(*) Marcatura e cert. N. Material Marking e Cert. N. 1016SA019 **Data:** Date: 25-01-2019

Descrizione Description Description CAPS 1.1/2" SCH.40/S

Specifica Specification Spécification BW FITTINGS TO ASTM A/815M-14e1
ASME SA/815M ed.17 UNS S32760
DIMS/ENDS B16.9-2012

Materiale base - Fabbricante: OUTO KUMPU Cert. No.: 2414740
Raw material - manufacturer/Materiel du depart - fabriquant:
OUTO KUMPU Cert. No.: 2414740

Test produzione
Production test/Coupon de production

Caratteristiche meccaniche
Mechanical Properties/Caracteristiques Mechaniques

Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS	**Colata N.** Heat N. Couléè N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement 2"	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
QTR: 01/SDSS/A Rev.4 Specimens location drawing as per relevant QTR	564630	041/19	614	818	32.0	HRC<28	HRC 23	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Couléè N.	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**Mo**	**Cu**	**Co**	**N**	**W**		**PRE**	**FERRITE**
564630	0,015	0,28	0,70	0,027	0,001	25,41	6,73	3,47	0,56	0,56	0,275	0,61		41.3	47.5

Prove
Tests/Tests

Altri Others Autres G-48 MET.A

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/UE annex I para 4.3
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTORY
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262 Pr E
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.:1786/19
- MATERIAL AND TESTS ACCORDING TO M-630 REV.6 - MDS D53 REV.5
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT WITH RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication
Formato a freddo Cold formed Formés à froid — **Senza saldatura** Seamless Sans soudure

Ispezione
Inspection/inspéction
Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1130°C

Solution Annealing at 1130°C , water quenching

Hypertrempés à 1130°C

Heat treatment soaking time for 30 minutes, batch n. 0911

Guaranteed caracteristics (A.M. du 24.03.78)
Caracteristiques garanties pour Z2CN18-10 et Z2CND17-13
C <= 0.25% Rm <= 760 N/mm2
S <= 0.05% Rm(A-2) <= 10500 N/mm2
P <= 0.05% A% sur 5,65 sqrt(So) >= 16

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica Trade Mark

Ispettore
Inspector/Inspecteur

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 1016SA019 - Qty:1,00
Customer: ROSETTI MARINO S.p.A.
Description: CAPS 1.1/2" SCH.40/S
Order: 1724000839 - 22.04.24 - Item n.: 170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

SIDER TEST Srl
Mechanical and Chemical Laboratory Non Destructive Tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it
www.sidertest.it *Your Strategic Partner in Material Testing!*

RAPPORTO DI PROVA/TEST REPORT

PM 1786 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1969**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2"	1		**041/19**	**564630**	**ASTM A 815-17 UNS S32760**

PROVA DI TRAZIONE A TEMPERATURA AMBIENTE/ Tensile test at room temperature

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Dimensioni/ Dimension Wth	Ø / Width	ØPipe mm	Lo/ Lo	Posizione di prelievo/ Test position	Temp./ Temp. °C	Snervamento/ Yield strength Mpa		Mpa	Rottura/ Tensile strength Rm Mpa		Allungamento/ Elongation A (%)		Strizione/ Area Reduction Z (%)	S/R/ Ratio Yield strength / Tensile strength	Data esecuzione/ Date of Testing
8155	ASTM A 370-17a (Tension Test)	RTX_D53 Rev.7	3,91	12,55		50,00	B T FT	23	(≥550)	Rp0.2%	**614**	(750÷895)	**818**	(≥25)	**32,0**			30/01/2019

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

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Data Ingresso Materiale/ Date of Material Arrival **28/01/2019**

Data Rapporto di prova/ Test Report Date **31/01/2019**

Firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi
Heat num. or Pos. marking: 1016SA019 - Qty:1,00
Customer: ROSETTI MARINO S.p.A.
Description: CAPS 1.1/2" SCH.40/S
Order: 1724000839 - 22.04.24 - Item n.: 170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC20240000469S * CERTIFIED TRUE COPY
* Issued 20-05-2024

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RAPPORTO DI PROVA/TEST REPORT

A923C 1786 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1969**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2"	1		**041/19**	**564630**	**ASTM A 815-17 UNS S32760**

Individuazione di fasi intermetalliche dannose: Prova di corrosione per "pitting" in cloruro ferrico/ Detecting Detrimental Intermetallic Phase: Ferric Chloride Pitting Corrosion Test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Lunghezza/ Length mm	Larghezza/ Width mm	Spessore/ Thickness mm	Area/ Area cm²
8163	ASTM A 923-14 (Met. C)	RTX_D53 Rev.7	B L FT	Meccanica/ Mechanical	49,67	23,74	3,8	29,16

Temperatura di prova (°C)/ Test temperature (°C) 50

Temperatura Minima Rilevata (°C)/ Minimum specimen preparation (°C) 49,22

Temperatura Massima Rilevata (°C)/ Maximum specimen preparation (°C) 50,58

Tempo di esposizione (ore)/ Exposure time (hours) 24

Data inizio/ Initial date	Data fine/ End date
29/01/2019 13:30:00	30/01/2019 13:30:00

Soluzione/ Solution FeCl3 - 6H2O 10% water solution

Peso iniziale/ Initial weight (g) 35,1066

Peso finale (g)/ Final weight (g) 35,1053

Perdita di peso (g)/ Weigth loss (g) 0,0013

Velocità di corrosione/ Corrosion speed (mg/(dm²*d)) **4,5**

Limite velocità di corrosione (mg/(dm²*d)) max./ Corrosion rate limit (mg/(dm²*d)) max. **10,0**

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Ingresso Materiale/ Date of Material Arrival **28/01/2019**

Data Rapporto di prova/ Test Report Date **31/01/2019**
firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy
Antonielli Stefano

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
Amani Paolo

Ispettori/Inspector

Cliente/Customer
ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness; [L]-long.

raccortubi Heat num. or Pcs. marking: 1016SA019 - Qty:1,00
Customer: ROSETTI MARINO S.p.A.
Description: CAPS 1.1/2" SCH.40/S
Order: 1724000839 - 22.04.24 - Item n.: 170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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RAPPORTO DI PROVA/TEST REPORT

A923A 1786 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1969**

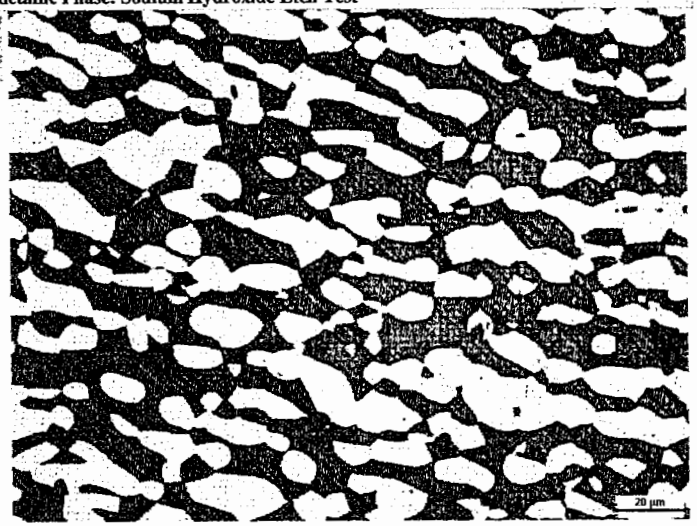
Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2"	1		**041/19**	**564630**	**ASTM A 815-17 UNS S32760**

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio/ Detecting Detrimental Intermetallic Phase: Sodium Hydroxide Etch Test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
8164	ASTM A 923-14 (Met. A)	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	31/01/2019

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	40g NaOH to 100g distilled water	Materiale base / Base Material



Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure.

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano, fasi intermetalliche e precipitati./Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Ingresso Materiale/ Date of Material Arrival **28/01/2019**

Data Rapporto di prova/ Test Report Date **31/01/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept
☐ Witness ☑ Review

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness: [T]-trasv.

raccortubi Heat num. or Pcs. marking: 1016SA019 - Qty:1,00
Description: CAPS 1.1/2" SCH.40/S
Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
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RAPPORTO DI PROVA/TEST REPORT

MIC 1786 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1969**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2"	1		**041/19**	**564630**	**ASTM A 815-17 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
8159	ASTM E 3-11(2017)+ASTM E 407-07(2015)e1	**RTX_053 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	31/01/2019

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	10% Oxalic	Materiale base / Base Material
		4.0 x 20.0 = 80.0 mm²

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da nitruri. / Structure free from nitrides.

20 µm

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Antonielli Stefano

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
Amani Paolo

Ispettori/Inspector

Cliente/Customer
ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness: [T]-trasv.

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MIC 1786 / 19

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Ordine/Order: **OF06523**

Commessa/Job: **259/18- 18/1969**

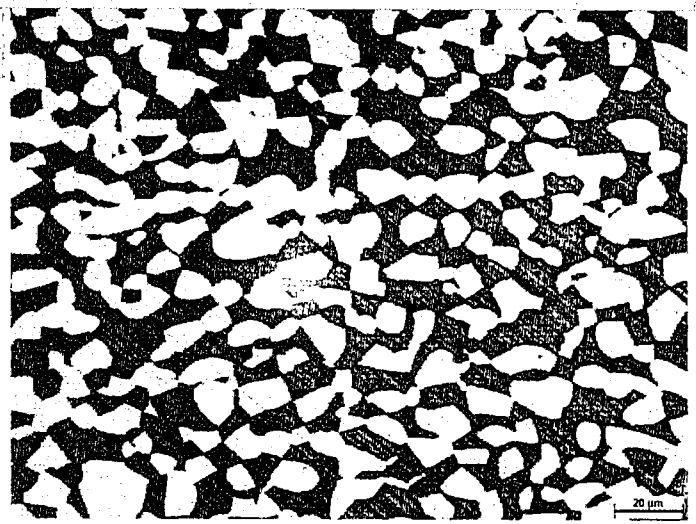
Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2"	1		**041/19**	**564630**	**ASTM A 815-17 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
8160	ASTM E 3-11(2017)+ASTM E 407-07(2015)e1	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	31/01/2019

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	20% NaOH	Materiale base / Base Material
		4.0 x 20.0 = 80.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano, fasi intermetalliche e precipitati./Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 1016SA019 - Qty:1.00
Customer: ROSETTI MARINO S.p.A.
Description: CAPS 1.1/2" SCH.40/S
Order: 1724000839 - 22.04.24 - Item n.: 170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
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RAPPORTO DI PROVA/TEST REPORT

DUR 1786 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1969**

Campione fornito da cliente/Sample supplied by the Customer :

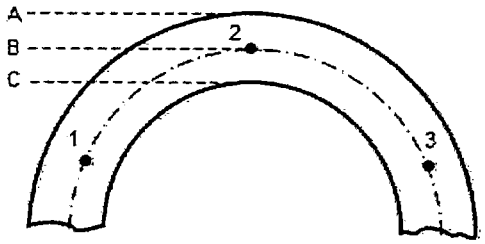
Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2"	1		**041/19**	**564630**	**ASTM A 815-17 UNS S32760**

PROVA DI DUREZZA HBW (Strumento di misura dell'impronta di Tipo A)/ HBW hardness test (Indentation measuring device Type A)

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position		Durezza/ Hardness	Data esecuzione/ Date of Testing
8157	ASTM E 10-17	RTX_D53 Rev.7	B	T	HBW 2.5/187.5	29/01/2019

(B1) - Base Material **MAX 270**

1 241 2 243 3 245



AB=BC= 1/2 AC

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

Position	Average	StdDev
(B1) - Base Material	243	2

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
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Data Ingresso Materiale/ Date of Material Arrival **28/01/2019**

Data Rapporto di prova/ Test Report Date **31/01/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Test Position Legend: [B]-Specimen in Base Material; [SZ]-along the thickness; [T]-trasv.

Customer: ROSETTI MARINO S.p.A.
Description: CAPS 1.1/2" SCH.40/S

raccortubi Heat num. or Pcs. marking: 1016SA019 - Qty:1,00

Order: 1724000839 - 22.04.24 - Item n.: 170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

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RAPPORTO DI PROVA/TEST REPORT

ANL 1786 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1969**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2"	1		**041/19**	**564630**	**ASTM A 815-17 UNS S32760**

ANALISI SPETTROMETRICA AD EMISSIONE ATOMICA SOTTOVUOTO/ Atomic emission vacuum Spectrometric analysis

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Temperatura di prova (°C)/ Test temperature (°C)	ID Gruppo / Group ID	Data esecuzione/ Date of Testing
8165	ASTM E 1086-14	RTX_D53 Rev.7 + STATOIL -2010080 Rev.0	B UP	20	7237	29/01/19

			%	Min.	Max.				%	Min.	Max.				%	Min.	Max.
C	**0,015**	**± 0,001**	97,5		0,030	**Nb**						**Fe**					
Si	**0,32**	**± 0,01**	97,5		1,00	**Ti**						**Ca**					
Mn	**0,73**	**± 0,02**	97,5		1,00	**W**	**0,66**	**± 0,07**	95,0	0,50	1,00	**Ta**					
P	**0,025**	**± 0,003**	97,5		0,030	**Pb**						**Sb**					
S	**0,002**	**± 0,001**	97,5		0,010	**Sn**						**H**					
Cr	**25,4**	**± 0,4**	95,0	24,0	26,0	**As**						**Cd**					
V						**B**						**Se**					
Mo	**3,5**	**± 0,1**	95,0	3,0	4,0	**N**	**0,28**	**± 0,02**	95,0	0,20	0,30	**Bi**					
Ni	**6,8**	**± 0,1**	95,0	6,0	8,0	**La**						**Hg**					
Cu	**0,57**	**± 0,02**	95,0	0,50	1,00	**Mg**											
Ce						**Zr**											
Al						**Zn**											
Co						**O**											

FORMULAS			%	Min.	Max.
PREN	**41,4**	**± 0,4**	97,5	40,0	

Decision rule:
the result is "Compliant to Specification" when:
- *Result ≥ Lower Limit (confidence interval CI=50+97,5 %)*
- *Result ≤ Upper Limit (confidence interval CI=50+97,5 %)*
- *Lower Limit ≤ Result ≤ Upper Limit (confidence interval CI=47,5+95%)*

When the result falls within the uncertainty range at the limit value, the result can be Probably Compliant or Probably Not Compliant

Expanded uncertainty below reported is based on standard uncertainty multiplied by a coverage factor k = 2 that corresponds to a coverage probability of about 95% for a normal distribution. The evaluation is based on EA 4/16 Ed. 2003

Note/ Remarks

Esito/ Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta /Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval.

Data Ingresso Materiale/ Date of Material Arrival **28/01/2019**

Data Rapporto di prova/ Test Report Date **31/01/2019**
firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

Test Position Legend: : [B]-Specimen in Base Material: [UP]-external sup.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 1016SA019 - Qty:1.00

Description: CAPS 1.1/2" SCH40/S

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

SIDER TEST Srl
Mechanical and Chemical Laboratory Non Destructive Tests
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www.sidertest.it *Your Strategic Partner in Material Testing!*

RAPPORTO DI PROVA/TEST REPORT

E562 1786 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1969**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2"	1		**041/19**	**564630**	**ASTM A 815-17 UNS S32760**

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti/ Determining volume fraction by systematic manual point count

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position			Preparazione provino/ Specimen preparation	Ingrandimento/ Enlargement	Misura del reticolo/ Grid size	Data esecuzione/ Date of Testing
8158	ASTM E 562-11	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B	T	FT	20% NaOH	500 X	40 mm x 40 mm 5 x 5 = 25 Points	31/01/2019

		Valore Min/ Value Min	Valore Max/ Value Max
Ferrite Vv (% Frazione di volume)/ Vv(% Volume Fraction)	47.5 ± 1.2	**40**	**55**
% Errore (RA)/ % Error (RA)	2.61		
Deviazione Standard/ Standard Deviation	3.3		
Nr. di campi per provino/sezione/spaziatura/angolo/ Nr. of fields for specimens/section/angle	30 / 4 x 20 mm / 1 x 3.0 mm / 45°		

Ferrite % Frazione di volume per ciascun campo esaminato/ % Volume Fraction for each metallographic section

1	**50**	2	**46**	3	**44**	4	**42**	5	**50**
6	**52**	7	**50**	8	**48**	9	**52**	10	**42**
11	**46**	12	**44**	13	**46**	14	**42**	15	**50**
16	**50**	17	**50**	18	**50**	19	**46**	20	**52**
21	**42**	22	**44**	23	**52**	24	**48**	25	**48**
26	**44**	27	**50**	28	**46**	29	**48**	30	**50**

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.

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Data Ingresso Materiale/ Date of Material Arrival **28/01/2019**

Data Rapporto di prova/ Test Report Date **31/01/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness: [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

raccortubi Heat num. or Pcs. marking: 1016SA019 - Qty:1,00
Customer: ROSETTI MARINO S.p.A.
Description: CAPS 1.1/2" SCH.40/S
Order: 1724000839 - 22.04.24 - Item n.: 170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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RAPPORTO DI PROVA/TEST REPORT

G48ACE 1786 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1969**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2"	1		**041/19**	**564630**	**ASTM A 815-17 UNS S32760**

Prova di "pitting" in ferro-cloruro/ Ferric chloride pitting test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Lunghezza/ Length mm	Larghezza/ Width mm	Spessore/ Thickness mm	Area/ Area cm²	
8162	ASTM G 48-11(2015) - Met. A	RTX_D53 Rev.7	B L FT	Meccanica/ Mechanical	50.02	25,26	3,83	31,04	[(LxWx2)+(WxTx2)+(LxTx2)] / 100

Temperatura di prova (°C)/ Test temperature (°C) 50

Tempo di esposizione (ore)/ Exposure time (hours) 24

Data e ora inizio/ Initial date and time	Data e ora fine/ End date and time
29/01/2019 13:30:00	30/01/2019 13:30:00

Soluzione/ Solution FeCl3 · 6H2O 10% WATER SOLUTION

Peso iniziale/ Initial weight (g)	36,6662	
Peso finale (g)/ Final weight (g)	36,6659	
Perdita di peso (g)/ Weigth loss (g)	0,0003	
Perdita di massa/ Specimen mass loss	0,0967	g/m²
Limite perdita di massa max/ Limit Specimen mass loss max	**4,0**	**g/m²**

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X / NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata/ Examined area cm² 25,27 (LxWx2)/100

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
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Data Ingresso Materiale/ Date of Material Arrival **28/01/2019**

Data Rapporto di prova/ Test Report Date **31/01/2019** firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept
☐ Witness ☒ Review

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness; [L]-long.

Customer: ROSETTI MARINO S.p.A.

Description: CAPS 10" SCH.10/S

raccortubi Heat num. or Pcs. marking: 51856 - Qty:2.00

Order: 1724000839 - 22.04.24 - Item n.: 180 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010

Protocol: CTCERC2024000004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

CTCERT2024000003221.1.0001

tecninox

Stabilimento/ Plant: Via Don Spagnoli 5 –29010 SARMATO (PC)
Tel. (+39) 0523.887452-887991 – fax (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. – V.le De Gasperi 194
20010 Marcallo con Casone (MI) - ITALIA
Tel. (+39) 02.976300.1 - fax (+39) 02.90376337 –
info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificateType: EN 10204 3.1
Certificate de Réception Type: EN 10204 3.1

Cliente RACCORTUBI S.p.A.
Customer/Client

Ordine N. OS00168
P.O.N./Commande N.

Pos. N. 2 **Q.tà** 9
Item/Poste *Q.ty/Q.té*

(*) Marcatura e cert. N. **51856** **Data:** 29/04/2024
Material Marking e. Cert. N. *Date:*
Marquage du Materiel

Descrizione CAPS 10" SCH.10/S
Description
Description

Specifica FITTINGS TO ASTM SA/A 403/403M-23
Specification ASME SA403/SA403-22b WP316/316L
Specification DIMS/ENDS ANSI ASME B16.9-ed.2018

Materiale base/*Raw material/Materiel du depart*
Fabbricante/*Manufacturer/Fabriquant : MARCEGAGLIA* Cert. No. : 10723195093

Specifica *Specification/Specification*	**Caratteristiche meccaniche** *Mechanical Properties/Caracteristiques Mechaniques*							
	Colata N. *Heat N. Coulée N.*	**N. prova** *Specimen N. Echantill. N.*	**Snervamento** *Yeld Strength Limite d'elasticité* **N/mm²**	**Rottura** *Tensile Strength Resistance à la traction* **N/mm²**	**Allungam.%** *Elongation Allongement*	**Durezza** *Hardness as per NACE MR01-75*	**Durezza** *Hardness Dureté* **HRB**	**Resilienza** *Impact energy Resilience* **Joules**
PLATE TO ASTM A240-20 TP316/316L DIMS TO ANSI B36.19	51856		301	632	54.3	HRC<22	83	

Analisi Chimica %
Chemical composition/Composition chimique

Colata N. *Heat N. Coulée N.*	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**N**						
51856	0,022	0,530	0,910	0,0340	0,002	17,20	10,00	0,045						

Prove/*Tests/Tests*

Prova di corrosione A262 Prat. E: Conforme
Corrosion Test A262 Pract. E: In Conformity
Essais de corrosion A262 Prat. E: En Conformité

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o del laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the test.
L'analyse chimique et les caracteristiques mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a executé les tests.

Responsabile controllo Qualità
Quality Control Manager

Note/*Remarks/Notes*

MATERIAL CONFORMS TO NACE MR01.75/ISO 15156 & MR0103 CURRENT EDITION
Certified acc.to PED 2014/68/EU

ALL FITTING HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione/*Manufacture/Méthode de fabrication*

Formato a freddo *Cold formed* *Formés a froid*
Senza saldatura *Seamless* *Sans soudure*

Ispezione/*Inspection/Inspéction*

– **Esame visivo dimensionale: Buono**
Visual and dimensional test: Good
Examen visuel et dimensionel
– **Identificazione materiale:Buono**
Positive Material Identification :Satisfactory
Analyse de controle de produit :Satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique

Solubilizzazione a 1050 °C
Solution Annealing at 1050 °C, Water quenching
Hypertrempés à 1050°C

Guaranted characteristics (A.M. du 24.03.78)
Caracteristiques garanties pour Z2CN18-10 et Z2CND17-13

C ≤ 0.25%	**Rm ≤ 760 N/mm²**
S ≤ 0.05%	**Rm(A-2) ≤ 10500 N/mm²**
P ≤ 0.05%	**A% sur 5.65 √So ≥ 16**

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel à eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore/Inspector/Inspecteur

ROSETTI MARINO
Supply Management Dept.
264/996
ness Review

CTCERT20220000232 9.1

raccortubi Heat num. or Pcs. marking: 519724 - Qty:4,00

Customer: ROSETTI MARINO S.p.A.

Description: CAPS 1" SCH.40/S

Order: 1724000839 - 22.04.24 - Item n.: 190 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201 0

Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

tecninox

Stabilimento/ Plant: Via Don Spagnoli 5 - 29010 SARMATO (PC)
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Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - V.le De Gasperi 194
20010 Marcallo con Casone (MI) - ITALIA
Tel. (+39) 02.976300.1 - fax (+39) 02.90376337 -
info@raccortubi.it

Certificato di collaudo d officina tipo: EN 10204 3.1
Product test certificateType: EN 10204 3.1
Certificate de R¶ception Type: EN 10204 3.1

Cliente RACCORTUBI S.p.A.
Customer/Client

Ordine N. OS00073
P.O.N./Commande N.

Pos. N. 17 Q.t 50
Item/Poste Q.ty/Q.t¶

(*) Marcatura e cert. N. 519724 Data: 21/04/2022
Material Marking e. Cert. N. Date:
Marquage du Materi· l

Descrizione CAPS 1_SCH.40/S
Description
Description

Specifica FITTINGS TO ASTM A403/403M
Specification ASME SA403/SA403M latest edition
Specification WP316/316L, DIMS/ENDS ANSI B16.9-2018

Materiale base/Raw material/Materiel du depart
Fabbricante/Manufacturer/Fabriquant: MARCEGAGLIA Cert. No. :10718413394

Specifica Specification/Specification	Caratteristiche meccaniche Mechanical Properties/Caracteristiques Mechaniques							
	Colata N. Heat N. Coul¶e N.	N. prova Specimen N. Echantill. N.	Snervamento Yeld Strength Limite d elasticit¶ N/mmД	Rottura Tensile Strength Resistance la traction N/mm/	Allungam.% Elongation Allongement	Durezza Hardness as per NACE MR01-75	Durezza Hardness Duret¶ HRB	Resilienza Impact energy Resilience Joules
PLATE TO ASTM A 240/15 TP316/316L DIMS TO ANSI B36.19	519724		308	610	55,1	HRC<22	82	

Analisi Chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Coul¶e N.	C	Si	Mn	P	S	Cr	Ni	N	Mo					
519724	0,013	0,570	1,480	0,0245	0,001	16,65	10,03	0,0375	2,009					

Prove/Tests/Tests

Prova di corrosione A262 Prat. E: Conforme
Corrosion Test A262 Pract. E: In Conformity
Essais de corrosion A262 Prat. E: En Conformit¶

I dati dell analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o del laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the test.
L analyse chimique et les caracteristiques m¶caniques sont en conformit¶ au certificat ¶mis par le producteur du materiel de base et/ou par le laboratoire qui a execut¶ les tests.

Responsabile controllo Qualit
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR01.75/ISO 15156 & MR0103 CURRENT EDITION
Certified acc.to PED 2014/68/UE

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione/Manufacture/M¶thode de fabrication

Formato a freddo Cold formed Form¶s a froid	Senza saldatura Seamless Sans soudure

Ispezione/Inspection/Insp¶ction

- Esame visivo dimensionale: Buono
  Visual and dimensional test: Satisfactory
  Examen visuel et dimensionel: Satisfaisant
- Identificazione materiale: Buono
  Positive Material Identification :Satisfactory
  Analyse de controle de produit :Satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1050 éC
Solution Annealing at 1050éC, Water quenching
Hypertremp¶s - 1050éC

Guaranted characteristics (A.M. du 24.03.78)
Caracteristiques garanties pour Z2CN18-10 et Z2CND17-13

C H0.25%	Rm H760 N/mmД
S H0.05%	Rm(A-2) H10500 N/mmД
P H0.05%	A% sur 5.65 ı So h 16

Il materiale · stato fornito in conformit ai requisiti dell ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel - et¶ trouv¶ conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore/Inspector/Inspecteur

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi

Customer: ROSETTI MARINO S.p.A.

Description: CAPS 1.1/2" SCH.40/S

Heat num. or Pcs. marking: 1014684 - Qty:10,00

Order: 1724000839 - 22.04.24 - Item n.: 200 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

CTCERT202300003889.1.0001

tecninox

Stabilimento/ Plant: Via Don Spagnoli 5 –29010 SARMATO (PC)
Tel. (+39) 0523.887452-887991 – fax (+39) 0523.887687

Sede Operativa / Commercial Office:
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20010 Marcallo con Casone (MI) - ITALIA
Tel. (+39) 02.976300.1 - fax (+39) 02.90376337 –
info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificateType: EN 10204 3.1
Certificate de Réception Type: EN 10204 3.1

Cliente RACCORTUBI S.p.A.
Customer/Client
Ordine N. OS000324
P.O.N./Commande N.

Pos. N. 08 **Q.tà** 73
Item/Poste *Q.ty/Q.té*

(*) Marcatura e cert. N. **1014684** **Data:** 09/11/2022
Material Marking e. Cert. N. *Date:*
Marquage du Materiél

Descrizione CAPS 1.1/2" SCH.40/S
Description
Description

Specifica FITTINGS TO ASTM A403/403M-22
Specification ASME SA403/SA403M ed.21
Specification WP316/316L, DIMS/ENDS ANSI B16.9-2018

Materiale base/*Raw material/Materiel du depart*
Fabbricante/*Manufacturer/Fabriquant: MARCEGAGLIA* Cert. No. : 10719226680

Specifica *Specification/Specification*	**Caratteristiche meccaniche** *Mechanical Properties/Caracteristiques Mechaniques*							
	Colata N. *Heat N. Coulée N.*	**N. prova** *Specimen N. Echantill. N.*	**Snervamento** *Yeld Strength Limite d'elasticité* **N/mm²**	**Rottura** *Tensile Strength Resistance à la traction* **N/mm²**	**Allungam.%** *Elongation Allongement*	**Durezza** *Hardness as per NACE MR01-75*	**Durezza** *Hardness Dureté* **HRB**	**Resilienza** *Impact energy Resilience* **Joules**
PLATE TO ASTM A240-15 TP316/316L DIMS TO ANSI B36.19	1014684		252	571	54,4	HRC<22	74	

Analisi Chimica %
Chemical composition/Composition chimique

Colata N. *Heat N. Coulée N.*	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**Mo**	**N**					
1014684	0,013	0,479	0,926	0,03	0,001	16,87	10,07	2,064	0,028					

Prove/*Tests/Tests*

Prova di corrosione A262 Prat. E: Conforme
Corrosion Test A262 Pract. E: In Conformity
Essais de corrosion A262 Prat. E: En Conformité

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o del laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the test.
L'analyse chimique et les caracteristiques mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a executé les tests.

Responsabile controllo Qualità
Quality Control Manager

Note/*Remarks/Notes*

MATERIAL CONFORMS TO NACE MR01.75/ISO 15156 LATED ED. AND MR0103 ED.12
Certified acc.to PED 2014/68/EC

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione/*Manufacture/Méthode de fabrication*

Formato a freddo *Cold formed* *Formés a froid*
Senza saldatura *Seamless* *Sans soudure*

Ispezione/*Inspection/Inspéction*

– **Esame visivo dimensionale: Buono**
Visual and dimensional test: Good
Examen visuel et dimensionel:Satisfaisant
– **Identificazione materiale:Buono**
Positive Material Identification :Satisfactory
Analyse de controle de produit :Satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1050 °C
Solution Annealing at 1050 °C, Water quenching
Hypertrempés à 1050 °C

Guaranted characteristics (A.M. du 24.03.78)
Caracteristiques garanties pour Z2CN18-10 et Z2CND17-13
C ≤ 0.25% **Rm ≤ 760 N/mm²**
S ≤ 0.05% **Rm(A-2) ≤ 10500 N/mm²**
P ≤ 0.05% **A% sur 5.65 √So ≥ 16**

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel à eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore/Inspector/Inspecteur

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☑ Review

raccortubi
Heat num. or Pcs. marking: M230405 - Qty:3.00
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 45° LR 2" SCH.10/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 210 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC2024000004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024
CTCERT2023000004627.1.0001

Cert. to RACCORTUBI S.P.A

Order No. : 23TEC001
(注文番号) 00000016 S dtd 26-01-2023

INSPECTION CERTIFICATE
EN 10204 : 3.1
S.P. UNITED INDUSTRY SDN. BHD.

(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Certification No. : MCP2310-00002-20

Invoice No : SP/FIT23-103

Date (日付) : 26/09/2023

LRQA CERTIFIED ISO 9001

Product	Specification	Specification for Pipe (Raw Material)
STAINLESS STEEL 45 DEG LONG RADIUS ELBOW (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 / ASME B16.9-2018 MSS SP-43-2019 / ASME BPVC II PART A-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*	Size	Dimension in mm		Lot No.	Quantity	Surface Inspection	Dimension Inspection	Manufacturing Method	Item Reference No.
		Outside Dia	Thickness						
1	2" X 10S	60.33	2.77	M230405	100	PASSED	PASSED	COLD FORMED	N/A

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

Chemical Composition of Pipe (Raw Material) %

*	Heat No.	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100	
1	221010BE03	1.8	35.1	105	37	1	1005	1626	202	
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300	

Mechanical Properties of Pipe (Raw Material)

Type of Specimen	YS Mpa	TS Mpa	EL% (GL:50mm)		Flattening Test	HT Mpa		Hardness Test HRB
Longitudinal	253	593	51		PASSED	PASSED		80
	MIN 205	MIN 515	MIN 28					

* Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, NACE MR0103:2015. ISO 9001-2015/EN 10204-3.1. PED 2014/68/EU ANNEX I SECTION 4.3 INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD. HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER. PICKLED AND PASSIVATED.
NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.

We certify that the above material has been inspected and tested and complies with the order/contract. The material is manufactured in SPI and melting country of raw material are in Malaysia or China or Taiwan origin (attached)
Material here certified does not contain any steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No COUNCIL REGULATION (EU) 2023/1214 of 23 June 2023 and amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilizing the situation in Ukraine.

OTHERS:	DESCRIPTION :
N/A	N/A

ROSETTI MARINO
Supply Management Dep
Witness Revie

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.

Head of QA/QC Dept.

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

PTD 204334,JALAN PLATINUM UTAMA,

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZONE 12B, 81700 PASIR GUDANG

JOHOR DARUL TAKZIM, MALAYSIA

Tel: +607-2518888 Fax: +607-2519999 Website: www.pantechssalloy.com

http:// www.pantech-group.com

NSF Certified to NSF/ANSI 61 — LRQA CERTIFIED ISO 9001 Approval No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO. : 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Raccortubi S.p.A

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-47098

Date : 2 Oct 2023

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
00005390	E000005892	ASTM A403/A403M - 22 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 23 / ASME SA 960/SA960M - 21 / ASME SECTION II PART A-2021	Solution Treated, Pickled-Passivated

Heat No.	Product & Size	Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
LN008-1	4" SCH 10s 45° Lr ELBOW	100	WP316/316L-S	PASSED	NY220918AT17

Specification / Heat No.	Chemical Composition (%)										Tensile Test *1			Hardness	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS (KSI / MPa)	TS (KSI / MPa)	E (%)	(HRB)	
Max															
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-		-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
LN008-1	0.012	0.45	1.02	0.030	0.001	16.23	10.17	2.08	< 0.01		242	578	58	66	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER; AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-22 STANDARD, SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE, LONGITUDINAL DIRECTION, (GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-15 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT

Pantech Stainless & Alloy Industries Sdn. Bhd.
200601013677 (733428-W)
PTD 204334, Jalan Platinum Utama,
Kawasan Perindustrian Pasir Gudang, Zon 12B,
81700 Pasir Gudang, Johor.
Tel: +607-251 8888 Fax: +607-251 9999

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. QA/QC MANAGER HASSANUDDIN

Head of Quality Assurance Department

ROSETTI MARINO
Supply Management Dept
☐ Witness ☐ Review

Form :FQA-030b R.6; 04-03-2022

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 220 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: CURVE 45° LR 4" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: LN008-1 - Qty:1,00 Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

ISO 9001:2000 AD 2000-Merkblatt W0 PED 97/23/EC CE Certificate TS Manufacture License of Special Equipment China National Petroleum Corporation Supplier

Zhejiang Yuli Pipeline Industry Co Ltd

Mill Test Certificate

BAJA INDUSTRIAL ZONE SHACHEN TOWN, LONGWAN DISTRICT, WENZHOU, ZHEJIANG, CHINA

Certificate: EN10204/3.1	Certificate-NO: MC-TYF-6-20080627118	Page 118 of 200

L/C NO.:32390CI003798/08

Customer:	[redacted]
Order No.:	YL 006
Description:	Seamless stainless steel BW fittings
Specification:	ANSI/ASTM B16.9, B16.25
Material:	ASTM A403/ASME SA403-WPS-316/316L(2005)
Workmanship	Cold forming
Heat Treatment:	Solution annealing and quenched

Marking:
- Manufacture's Mark
- Dimension & Schedule
- Material S(Seamless)orW(Welded)
- Heat Number & Standard

Extend of material delivery:

Item No.	Description	Dimension	Quantity	Heat No.	Base Cert.No.	Remarks
1	ELB 45L/R	1 " SCH40S	100	E62123	200805087276003	
2						
3						
4						
5						

Inspection Results (The requirements are fulfilled as listed in Annex):

A、Chemical Analysis:

Heat No.		C%	Mn%	Si%	S%	P%	Cr%	Ni%	Mo%	Cu%	Ti%
1	E62123	0.021	1.42	0.63	0.003	0.026	16.51	11.13	2.23		
2											
3											
4											
5											

B、Mechanical Properties & Tensile Inspection :

Heat No.		Yield Strength		Tensile Strength	Elongation	Hardness	Charpy Impact			
		0.2%	1%							
1	E62123	282		623	57	74				
2										
3										
4										
5										

C、Inspection and Related Data Verify:

Dimensional check	OK	Hydrostatic pressure test	/
Surface quality inspection	OK	Radiography Examination	/
Penetration examination	OK	IC to ASTM A262 "E"	OK
PMI	OK	HT to NACE MR-0175	OK

D、Remarks:

Work inspector: 梅陈印春

Date: Jun.27.2008

ROSETTI MARINO
Supply Management Dept.
Witness ☒ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 230 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: CURVE 45° LR 1" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: E62123 - Qty:5,00

Protocol: CTCERC202400004695 * CERTIFIED COPY * Issued 20-05-2024

raccortubi

Heat num. or Pcs. marking: 1035SA022 - Qty:18,00

Customer: ROSETTI MARINO S.p.A.

Description: CURVE 90° LR 1" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5
29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente Customer/ RACCORTUBI S.p.A.

Ordine N. P.O.N./C.N. Master plan Maggio 2022/2

Pos. N. Item/Poste 28 **Q.tà** Q.ty/Q.té 361

(*) Marcatura e cert. N. Material Marking e Cert. N. 1035SA022

Created on: 30-06-2022

Descrizione Description Description ELBOWS 90° LR 1" SCH.40/S SEAMLESS

Specifica Specification Spécification BW FITTINGS TO ASTM A/815M-2021
ASME SA/815-21 UNS S32760
DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: SCHOELLER BLECKMANN Cert. No.: 726276
Raw material - manufacturer/Materiel du depart - fabriquant: SMLS PIPES TO ASTM A-790 UNS S32760
SCHOELLER BLECKMANN Cert. No.: 726276

Test produzione Production test/Coupon de production	Caratteristiche meccaniche Mechanical Properties/Caracteristiques Mechaniques							
	Colata N. Heat N. Coulée N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement 2"	**Durezza** Hardness as per NACE MR01-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS QTR: 01/SDSS/A Rev.5 Specimens location drawing as per relevant QTR	57472	141/22	662	867	30.3	HRC<28	HRC 24	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Coulée N.	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**Mo**	**Cu**	**W**	**Co**	**N**		**PRE**	**FERRITE**
57472	0,011	0,26	0,70	0,022	0,0005	25,62	6,87	3,66	0,72	0,590	0,049	0,253		41.746	47.7

Prove
Tests/Tests

Altri Others Autres G-48 MET.A

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità

Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/EU annex I para 4.3
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTORY
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262 Pr E
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.: 14833/22
- MATERIAL AND TESTS ACCORDING TO M-630 REV.7 - MDS D53 REV.6
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT WITH RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication

Formato a freddo	**Senza saldatura**
Cold formed	Seamless
Formés à froid	Sans soudure

Ispezione
Inspection/inspéction
Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1130°C

Solution Annealing at 1130°C , water quenching

Hypertrempés à 1130°C

Heat treatment soaking time for 20 minutes, batch n. 0146

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica Trade Mark

Ispettore
Inspector/Inspecteur
ROSETTI MARINO
Supply Management Dept.

☐ Witness ☑ Review

270/996

raccortubi Heat num. or Pos. marking: 10355A022 - Qty:18.00

Customer: ROSETTI MARINO S.p.A.

Description: CURVE 90° LR 1" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

G48ACE 14833 / 22

Rif. Lab SIM (FCP) : **4546 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **MASTER PLAN MAGGIO 2022/2**

Commessa/Job **31005/22 22/0231**

Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1" W.T. 3.38 mm	1		141/22	57472	**ASTM A 815-20 UNS S32760**

Prova di "pitting" in ferro-cloruro/ Ferric chloride pitting test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimensioni/ Dimension mm Lunghezza/ Length	Larghezza/ Width	Spessore/ Thickness	Area/ Area cm²	
76481	ASTM G48 – 11 (R2020)e1 Method A	RTX_D53 Rev.9	B L FT	Meccanica/ Mechanical	51.03	25.63	3.17	31.02	[(LxWx2)+(WxTx2)+(LxTx2)] / 100

Temperatura di prova (°C)/ Test temperature (°C)	50	Peso iniziale/ Initial weight (g)	33.8941
Tempo di esposizione (ore)/ Exposure time (hours)	24	Peso finale (g)/ Final weight (g)	33.8936
Data e ora inizio/ Initial date and time	Data e ora fine/ End date and time	Perdita di peso (g)/ Weigth loss (g)	0.0005
05/07/2022 09:42:47	06/07/2022 09:42:47	Perdita di massa/ Specimen mass loss	0.2 g/m²
Soluzione/ Solution FeCl3 6% SOLUTION		**Limite perdita di massa max/ Limit Specimen mass loss max**	**1.0 g/m²**

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X / NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata/ Examined area cm² 26.16 (LxWx2)/100

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival **01/07/2022**

Data Rapporto di prova/ Test Report Date **07/07/2022**

Firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness; [L]-long.

raccortubi Heat num. or Pcs. marking: 1035SA022 - Qty:18,00
Customer:
Description: CURVE 90° LR 1" SCH.40/S SEAMLESS
ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC2024000004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

E562 14833 / 22

Rif. Lab SIM (FCP) : **4546 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **MASTER PLAN MAGGIO 2022/2**

Commessa/Job **31005/22 22/0231**

Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1" W.T. 3.38 mm	1		141/22	57472	**ASTM A 815-20 UNS S32760**

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti/ Determining volume fraction by systematic manual point count

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Ingrandimento/ Enlargement	Misura del reticolo/ Grid size	Data esecuzione/ Date of Testing
76477	ASTM E562 – 19e1	RTX_D53 Rev.9 + STATOIL -2010080 Rev.0	B T FT	20% NaOH	500 X	Square 5 x 5 = 25 Points	05/07/2022

		Valore Min/ Value Min	Valore Max/ Value Max
Ferrite Vv (% Frazione di volume)/ Vv(% Volume Fraction)	47.7	40	55
s 3,9 95% C.I. 1,5	%RA 3.04		

Ferrite % Frazione di volume per ciascun campo esaminato/ % Volume Fraction for each metallographic section

1	48	2	46	3	54	4	46	5	50
6	42	7	46	8	42	9	54	10	46
11	54	12	48	13	54	14	52	15	50
16	50	17	44	18	48	19	46	20	44
21	42	22	48	23	50	24	46	25	54
26	46	27	44	28	46	29	50	30	42

Nr. di campi per provino/sezione/spaziatura/angolo/ Nr. of fields for specimens/section/angle: 30 / 3.00 x 20 mm / 1 x 3.0 mm / 45°

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival: 01/07/2022

Data Rapporto di prova/ Test Report Date: 07/07/2022 firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: Antonielli Stefano

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: Amani Paolo

Ispettori/Inspector

Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 10355A022 - Qty:18,00
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000210
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

ANL 14833 / 22

Rif. Lab SIM (FCP) : **4546 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **MASTER PLAN MAGGIO 2022/2**

Commessa/Job **31005/22 22/0231**

Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1" W.T. 3.38 mm	1		141/22	57472	**ASTM A 815-20 UNS S32760**

ANALISI SPETTROMETRICA AD EMISSIONE ATOMICA A SCINTILLA/ Spark Atomic Emission Spectrometry

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Temperatura di prova (°C)/ Test temperature (°C)	ID Gruppo / Group ID	Unità di misura/ Unit of measure	Data esecuzione/ Date of Testing
76484	ASTM E1086 – 14	RTX_D53 Rev.9	B / UP	20 °C	5023	% by weight	05/07/2022

			Min.	Max.				Min.	Max.				Min.	Max.
C	0,012	±0,002		0.030	Nb					Fe				
Si	0,30	±0,02		1.00	Ti					Ca				
Mn	0,71	±0,04		1.00	*W	0,62	±0,05	0.50	1.00	Ta				
P	0,023	±0,002		0.030	Pb					Sb				
*S	0,003	±0,001		0.010	Sn					H				
*Cr	25,7	±0,3	24,0	26,0	As					Cd				
V					B					Se				
*Mo	3,7	±0,2	3,0	4,0	*N	0,26	±0,02	0.20	0,30	Bi				
*Ni	6,9	±0,4	6,0	8,0	La					Hg				
*Cu	0,75	±0,04	0,50	1,00	Mg									
Ce					Zr									
Al					Zn									
Co					O									

FORMULAS			Min.	Max.
*PREN	42,07	±0,71	40.00	

Decision rule:
the result is "Compliant to Specification" when:
- *Result-U ≥ Lower Limit (<2,5 %PFA)*
- *Result+U ≤ Upper Limit (<2,5 %PFA)*
- *Result-U≥ Lower Limit and Result+U≤ Upper Limit (<5 %PFA)*

When the result falls within the uncertainty range at the limit value, the result is Not Compliant.
Where U is the Uncertainty and PFA is the Probability of False Accept (ILAC-G8:09/2019)

The symbol * before the element or formula indicates a value that is outside the Laboratory's accredited range for that element/formula.The symbol (I) means that the sensitivity of the instrument does not satisfy the required number of significant digits.
Expanded uncertainty above reported is based on standard uncertainty multiplied by a coverage factor k = 2 that corresponds to a coverage probability of about 95% for a normal distribution. The evaluation is based on EA 4/16 Ed. 2003

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival: 01/07/2022
Data Rapporto di prova/ Test Report Date: 07/07/2022
firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: Antonielli Stefano
Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: Amani Paolo

Ispettori/Inspector

Cliente/Customer

Test Position Legend: [/]-/: [B]-Specimen in Base Material; [UP]-external sup.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 10355A022 - Qty:18,00
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020 10
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

DUR 14833 / 22

Rif. Lab SIM (FCP) : **4546 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **MASTER PLAN MAGGIO 2022/2**

Commessa/Job **31005/22 22/0231**

Campione fornito da cliente/Sample supplied by customer :

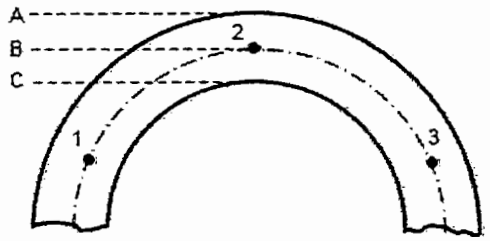
Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1" W.T. 3.38 mm	1		**141/22**	**57472**	**ASTM A 815-20 UNS S32760**

PROVA DI DUREZZA HV10 - HV30 - HV5/ HV10 - HV30 - HV5 hardness test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Temp./ Temp.	Durezza/ Hardness	Data esecuzione/ Date of Testing
76476	ASTM E 92 – 17 (only Vickers)	RTX_D53 Rev.9	B T	20 °C	HV10	04/07/2022

(B1) - Base Material **MAX 286**

HV10	1	248	2	242	3	244



AB=BC= 1/2 AC

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

Position	Average	
(B1) - Base Material	245	HV10

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival **01/07/2022**

Data Rapporto di prova/ Test Report Date **07/07/2022**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept.
Witness Review

Test Position Legend: [B]-Specimen in Base Material; [SZ]-along the thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 1035SA022 - Qty:18,00
Description: CURVE 90° LR 1" SCH.40/S SEAMLESS
Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

MIC 14833 / 22

Rif. Lab SIM (FCP) : **4546 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **MASTER PLAN MAGGIO 2022/2**

Commessa/Job **31005/22 22/0231**

Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1" W.T. 3.38 mm	1		**141/22**	**57472**	**ASTM A 815-20 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
76478	ASTM E3 – 11(R2017) + ASTM E407 – 07 (R2015)e1	RTX_D53 Rev.9 + STATOIL -2010080 Rev.0	B T FT	05/07/2022

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	10% Oxalic	Specimen in Base Material 3.0 x 20.0 = 60.0 mm²

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da nitruri. / Structure free from nitrides.

20 µm

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
01/07/2022				
Data Rapporto di prova/ Test Report Date 07/07/2022 firmato elettronicamente/electronically signed	Antonielli Stefano	Amani Paolo		

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness: [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

raccortubi
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1" SCH.40/S SEAMLESS
Heat num. or Pcs. marking: 10355A022 - Qty:18,00
Order: 1724000839 - 22.04.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

MIC 14833 / 22

Rif. Lab SIM (FCP) : **4546 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **MASTER PLAN MAGGIO 2022/2**

Commessa/Job **31005/22 22/0231**

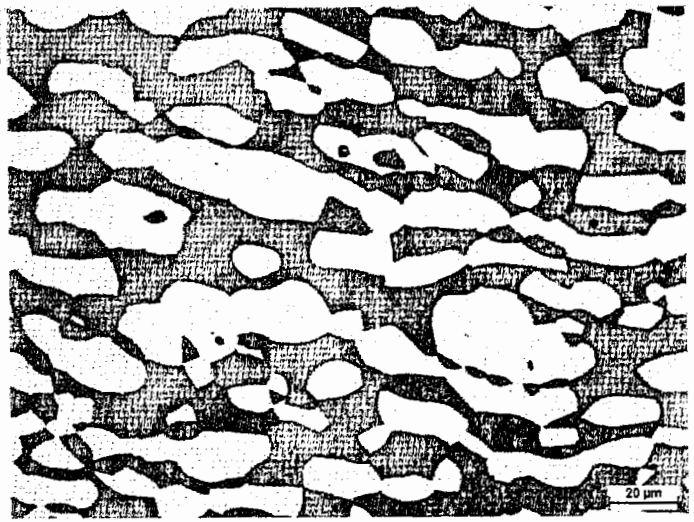
Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1" W.T. 3.38 mm	1		**141/22**	**57472**	**ASTM A 815-20 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
76479	ASTM E3 – 11(R2017) + ASTM E407 – 07 (R2015)e1	RTX_D53 Rev.9 + STATOIL -2010080 Rev.0	B T FT	05/07/2022

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	20% NaOH	Specimen in Base Material 3.0 x 20.0 = 60.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
01/07/2022	Antonielli Stefano	Amani Paolo		
Data Rapporto di prova/ Test Report Date: 07/07/2022 (firmato elettronicamente/electronically signed)				

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
☑ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 10355A022 - Qty:18,00
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC2024000004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

A923A 14833 / 22

Rif. Lab SIM (FCP) : **4546 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order: **MASTER PLAN MAGGIO 2022/2**

Commessa/Job: **31005/22 22/0231**

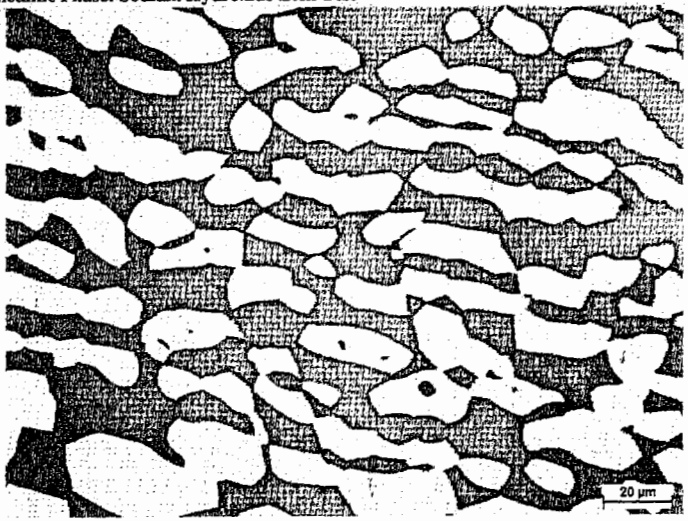
Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1" W.T. 3.38 mm	1		141/22	57472	ASTM A 815-20 UNS S32760

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio/ Detecting Detrimental Intermetallic Phase: Sodium Hydroxide Etch Test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
76483	ASTM A923 – 14 Method A	RTX_D53 Rev.9 + STATOIL -2010080 Rev.0	B T FT	05/07/2022

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	40g NaOH to 100g distilled water	Specimen in Base Material



Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure.

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
01/07/2022	Antonielli Stefano	Amani Paolo		
Data Rapporto di prova/ Test Report Date: 07/07/2022 (firmato elettronicamente/electronically signed)				

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 1035SA022 - Qty:18,00
Description: CURVE 90° LR 1" SCH.40/S SEAMLESS
Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

A923C 14833 / 22

Rif. Lab SIM (FCP) : **4546 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **MASTER PLAN MAGGIO 2022/2**

Commessa/Job **31005/22 22/0231**

Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1" W.T. 3.38 mm	1		**141/22**	**57472**	**ASTM A 815-20 UNS S32760**

Individuazione di fasi intermetalliche dannose: Prova di corrosione per "pitting" in cloruro ferrico/ Detecting Detrimental Intermetallic Phase: Ferric Chloride Pitting Corrosion Test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimensioni/ Dimension mm Lunghezza/ Length	Larghezza/ Width	Spessore/ Thickness	Area/ Area cm²
76482	ASTM A923 – 14 Method C	RTX_D53 Rev.9	B L FT	Meccanica/ Mechanical	51,3	25.8	3.18	31,37

Temperatura di prova (°C)/ Test temperature (°C) 50

Temperatura Minima Rilevata (°C)/ Minimum temperature observed (°C) 49,55

Temperatura Massima Rilevata (°C)/ Maximum temperature observed (°C) 50,69

Tempo di esposizione (ore)/ Exposure time (hours) 24

Data inizio/ Initial date	Data fine/ End date
05/07/2022 10:02:55	06/07/2022 10:02:55

Soluzione/ Solution FeCl3 · 6H2O 10% water solution

Peso iniziale/ Initial weight (g) 33,5864

Peso finale (g)/ Final weight (g) 33,5856

Perdita di peso (g)/ Weigth loss (g) 0,0008

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X /
NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Velocità di corrosione/ Corrosion speed (mg/(dm²*d)) **2,5**

Limite velocità di corrosione (mg/(dm²*d)) max./ Corrosion rate limit (mg/(dm²*d)) max. **10.0**

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival **01/07/2022**

Data Rapporto di prova/ Test Report Date **07/07/2022**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: Antonielli Stefano

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: Amani Paolo

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept.
☑ Witness ☑ Review

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

raccortubi Heat num. or Pcs. marking: 1035SA022 - Qty:18,00

Customer: ROSETTI MARINO S.p.A.

Description: CURVE 90° LR 1" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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mechanical chemical non destructive tests
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U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

PM 14833 / 22

Rif. Lab SIM (FCP) : **4546 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **MASTER PLAN MAGGIO 2022/2**

Commessa/Job **31005/22 22/0231**

Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1" W.T. 3.38 mm	1		141/22	57472	**ASTM A 815-20 UNS S32760**

PROVA DI TRAZIONE A TEMPERATURA AMBIENTE/ Tensile test at room temperature

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Dimensioni/ Dimension Wth mm	Ø / Width mm	ØPipe mm	Lo (mm)	Posizione di prelievo/ Test position	Temp./ Temp. °C	Snervamento/ Yield strength MPa		Rottura/ Tensile strength Rm MPa		Allungamento/ Elongation A (%)		Strizione/ Area Reduction Z (%)	S/R/ Ratio Yield strength / Tensile strength	Data esecuzione/ Date of Testing
76474	ASTM A370 - 21 §6÷14, § A1.3, § A2.2 and § A3.2	RTX_053 Rev.9	3,58	12,50		50,00	B L FT	23	(≥550)	Rp0,2% 662		(≥750)	867	(≥25)	30,3			06/07/2022

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival **01/07/2022**

Data Rapporto di prova/ Test Report Date **07/07/2022**

Firmato elettronicamente/Electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy — *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy — *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

raccortubi Heat num. or Pos. marking: 1023SA024 - Qty:22,00

Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010

Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5
29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente Customer	RACCORTUBI S.p.A.
Ordine N. P.O.N./C.	Master plan Marzo 2024/2
Pos. N. Item/Poste	14
Q.tà Q.ty/Q.té	158

(*) Marcatura e cert. N. Material Marking e Cert. N.	1023SA024
Created on:	12-03-2024
Descrizione Description Description	ELBOWS 90° LR 1.1/2" SCH.40/S SEAMLESS
Specifica Specification Spécification	BW FITTINGS TO ASME II Part.A SA/815M Ed.2023 ASTM A/815M-2023 UNS S32760 DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: TUBACEX Cert. No.: 715498
Raw material - manufacturer/Materiel du depart - fabriquant: SMLS PIPES TO ASTM A-790 UNS S32760
TUBACEX Cert. No.: 715498

Test produzione
Production test/Coupon de production

Caratteristiche meccaniche
Mechanical Properties/Caracteristiques Mechaniques

Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS	**Colata N.** Heat N. Coulée N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement 2"	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
QTR: 01/SDSS/A Rev.5 Specimens location drawing as per relevant QTR	57031	22/24	716	902	31.1	HRC<28	HRC 24	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Coulée N.	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**Mo**	**Cu**	**Nb**	**W**	**Co**	**N**	**PRE**	**FERRITE**
57031	0,011	0,230	0,52	0,019	0,0004	25,60	6,90	3,65	0,69	0,004	0,63	0,045	0,251	41.661	49.9

Prove
Tests/Tests

Prova di corrosione A262 Prat. E: Conforme
Corrosion Test A262 Pract. E: In conformity
Essais de corrosion A262 Prat. E: En Conformité

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/EU annex I para 4.3
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTORY
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262 Pr E
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.: 6215/24
- MATERIAL AND TESTS ACCORDING TO M-630 REV.7 - MDS D53 REV.6
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT WITH RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS ACC. TO ASTM A380
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication

Formato a freddo	**Senza saldatura**
Cold formed	Seamless
Formés à froid	Sans soudure

Ispezione
Inspection/inspéction
Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1130°C

Solution Annealing at 1130°C , water quenching

Hypertrempés à 1130°C

Heat treatment soaking time for 20 minutes, batch n. 0236

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☐ Review

raccortubi Heat num. or Pcs. marking: 1023SA024 - Qty:22,00
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

SIDERTEST
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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

G48ACE 6215 / 24

Rif. Lab SIM (FCP): **2023 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	**ASTM A 815-23 UNS S32760**

Prova di "pitting" in ferro-cloruro/ Ferric chloride pitting test [Decision rule: Qs]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimensioni/ Dimension mm Lunghezza/ Length	Larghezza/ Width	Spessore/ Thickness	Area/ Area cm²	
32963	ASTM G48 – 11 (R2020)e1 Method A	RTX_D53 Rev.9	B L FT	Meccanica/ Mechanical	54,11	23,53	3,46	30,84	[(LxWx2)+(WxTx2)+(LxTx2)] / 100

Condizioni superficiali/ Surface condition	Lavorato/ Machined
Temperatura di prova/ Test temperature (°C)	50
Tempo di esposizione (ore)/ Exposure time (hours)	24

Data e ora inizio/ Initial date and time	Data e ora fine/ End date and time
18/03/2024 11:16:50	19/03/2024 11:16:50

Soluzione/ Solution FeCl3 6% SOLUTION

Peso iniziale/ Initial weight (g)	32,5083	
Peso finale/ Final weight (g)	32,508	
Perdita di peso/ Weigth loss (g)	0,0003	
Perdita di massa/ Specimen mass loss	0.1	g/m²
Limite perdita di massa max/ Limit Specimen mass loss max	**1.0**	**g/m²**

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X/ NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata/ Examined area cm² 25,46 (LxWx2)/100

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Ingresso Materiale/ Date of Material Arrival **13/03/2024**

Data Rapporto di prova/ Test Report Date **19/03/2024** firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer: ROSETTI MARINO Supply Management Dept.

☐ Witness ☑ Review

DECISION RULE:
- Ql — Qualitative
- Qs — Semi-quantitative
- Qn — Quantitative (Implicit Uncertainty)
- Qn — Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.

The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

raccortubi Heat num. or Pos. marking: 10235A024 - Qty:22,00
Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS
Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

E562 6215 / 24

Rif. Lab SIM (FCP): **2023 / 24 (A / A)**

LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	ASTM A 815-23 UNS S32760

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti/ Determining volume fraction by systematic manual point count [Decision rule: Qn]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Ingrandimento/ Enlargement	Misura del reticolo/ Grid size	Data esecuzione/ Date of Testing
32959	ASTM E562 – 19e1	RTX_D53 Rev.9 + STATOIL -2010080 Rev.0	B T FT	20% NaOH	500 X	Square 5 x 5 = 25 Points	19/03/2024

		Valore Min/ Value Min	Valore Max/ Value Max
Ferrite Vv (% Frazione di volume)/ Vv (% Volume Fraction)	49.9	40	55
s 3.4 95% C.I. 1.3 %RA 2.53			

Ferrite % Frazione di volume per ciascun campo esaminato/ % Volume Fraction for each metallographic section

1	46	2	48	3	48	4	54	5	50
6	52	7	48	8	54	9	54	10	48
11	50	12	50	13	46	14	46	15	54
16	42	17	46	18	48	19	54	20	48
21	52	22	46	23	54	24	50	25	54
26	52	27	54	28	48	29	48	30	54

Nr. di campi per provino/sezione/spaziatura/angolo/ Nr. of fields for specimens/section/angle: 30 / 3.50 x 20 mm / 1 x 3.0 mm / 45°

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival: **13/03/2024**

Data Rapporto di prova/ Test Report Date: **19/03/2024**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer: ROSETTI MARINO Supply Management Dept.

☐ Witness ☒ Review

DECISION RULE:
- Ql — Qualitativo
- Qs — Semi-quantitative
- Qn — Quantitative (Implicit Uncertainty)
- Qx — Quantitative (Non implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.

The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi Heat num. or Pos. marking: 10235A024 - Qty:22,00

Customer: ROSETTI MARINO S.p.A.

Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000210

Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

ANL 6215 / 24

Rif. Lab SIM (FCP): **2023 / 24 (A / A)**

LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	**ASTM A 815-23 UNS S32760**

ANALISI SPETTROMETRICA AD EMISSIONE ATOMICA A SCINTILLA/ Spark Atomic Emission Spectrometry

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Temperatura di prova/ Test temperature (°C)	ID Gruppo/ Group ID	Unità di misura/ Unit of measure	Data esecuzione/ Date of Testing
32966	PO 04-145 RC R13:2024	RTX_D53 Rev.9	B / UP	20	10324	% by weight	18/03/2024

			Min.	Max.				Min.	Max.				Min.	Max.
C	0,012	±0,003		0,030	Nb					Fe				
Si	0,26	±0,02		1,00	Ti					Ca				
Mn	0,53	±0,03		2,00	W	0,65	±0,05	0.50	1.00	Ta				
P	0,020	±0,002		0,030	Pb					Sb				
S	0,004	±0,001		0,010	Sn					H				
Cr	25,8	±0,2	24.0	26.0	As					Cd				
V					B					Se				
Mo	3,7	±0,2	3.0	4.0	N	0,27	±0,02	0.20	0.30	Bi				
Ni	7,0	±0,4	6.0	8.0	La					Hg				
Cu	0,72	±0,06	0.50	1.00	Mg									
Ce					Zr									
Al					Zn									
Co					O									

FORMULAS			Min.	Max.
*PREN	42,33	±0,71	40.00	

Decision rule:
the result is "Compliant to Specification" when:
- *Result-U ≥ Lower Limit (<2,5 %PFA)*
- *Result+U ≤ Upper Limit (<2,5 %PFA)*
- *Result-U≥ Lower Limit and Result+U≤ Upper Limit (<5 %PFA)*

When the result falls within the uncertainty range at the limit value, the result is Not Compliant.
Where U is the Uncertainty and PFA is the Probability of False Accept (ILAC-G8:09/2019)

The symbol * before the element or formula indicates a value that is outside the Laboratory's accredited range for that element/formula.The symbol (I) means that the sensitivity of the instrument does not satisfy the required number of significant digits.
Expanded uncertainty above reported is based on standard uncertainty multiplied by a coverage factor k = 2 that corresponds to a coverage probability of about 95% for a normal distribution. The evaluation is based on EA 4/16 Ed. 2003

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival: 13/03/2024

Data Rapporto di prova/ Test Report Date: 19/03/2024 firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: Antonielli Stefano

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: Amani Paolo

Ispettori/ Inspector

Cliente/ Customer

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

DECISION RULE:
- QI — Qualitative
- Qs — Semi-quantitative
- Qn — Quantitative (Implicit Uncertainty)
- Qn — Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment. The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [/]-/; [B]-Specimen in Base Material; [UP]-external sup.

raccortubi

Customer: ROSETTI MARINO S.p.A.

Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS

Heat num. or Pos. marking: 1023SA024 - Qty:22,00

Order: 1724000839 - 22.04.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010

Protocol: CTCERC2024000004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

DUR 6215 / 24

Rif. Lab SIM (FCP): **2023 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

Campione fornito da cliente/ Sample supplied by customer :

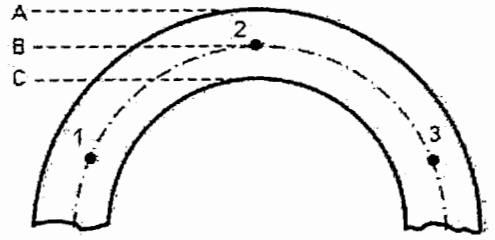
Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	ASTM A 815-23 UNS S32760

PROVA DI DUREZZA HV10 - HV30 - HV5/ HV10 - HV30 - HV5 hardness test [Decision rule: Qn]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position		Temp./ Temp.	Durezza/ Hardness	Data esecuzione/ Date of Testing
32958	ASTM E92 – 23 (only Vickers)	RTX_D53 Rev.9	B	T	20 °C	HV10	19/03/2024

(B1) - Base Material — **MAX 286**

HV10	1	267	2	269	3	261



AB=BC= 1/2 AC

Position	Average	
(B1) - Base Material	266	HV10

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival: **13/03/2024**

Data Rapporto di prova/ Test Report Date: **19/03/2024**
firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer: ROSETTI MARINO Supply Management Dept.

☐ Witness ☑ Review

DECISION RULE:
- Ql — Qualitative
- Qs — Semi-quantitative
- Qn — Quantitative (Implicit Uncertainty)
- Qn — Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment. The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [SZ]-along the thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 1023SA024 - Qty:22,00
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC2024000004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

MIC 6215 / 24

Rif. Lab SIM (FCP): **2023 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

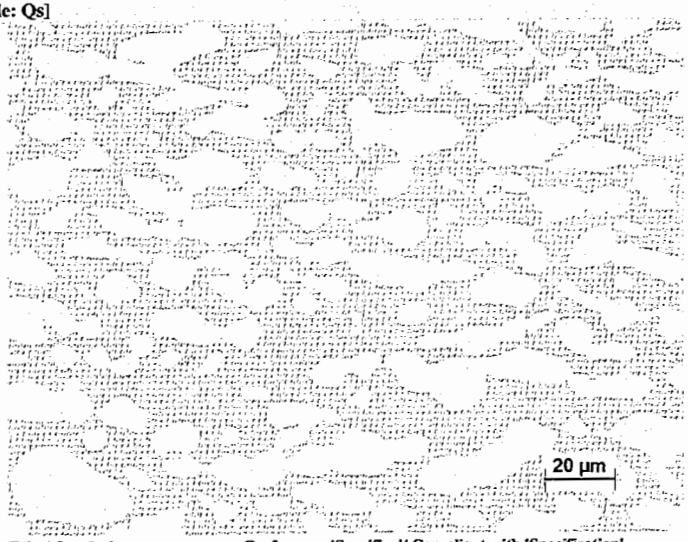
Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	**ASTM A 815-23 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination [Decision rule: Qs]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
32960	ASTM E3 – 11(R2017) / ASTM E407 – 23	RTX_D53 Rev.9 + STATOIL -2010080 Rev.0	B T FT	19/03/2024

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	10% Oxalic	Specimen in Base Material 3.5 x 20.0 = 70.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da nitruri. / Structure free from nitrides.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
13/03/2024				
Data Rapporto di prova/ Test Report Date: 19/03/2024 (firmato elettronicamente/electronically signed)	Antonielli Stefano	Amani Paolo		

DECISION RULE:
- Ql — Qualitative
- Qs — Semi-quantitative
- Qn — Quantitative (Implicit Uncertainty)
- Qn — Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment. The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 10235A024 - Qty:22,00
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC2024000004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

MIC 6215 / 24

Rif. Lab SIM (FCP) : **2023 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

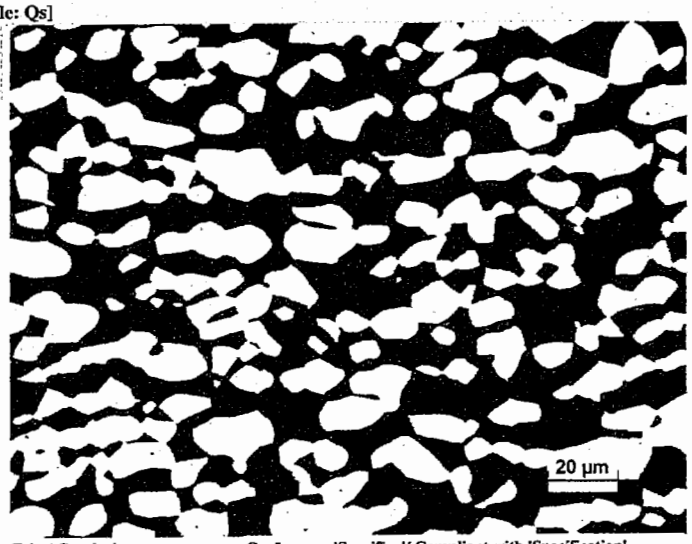
Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	**ASTM A 815-23 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination [Decision rule: Qs]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
32961	ASTM E3 - 11(R2017) / ASTM E407 - 23	RTX_D53 Rev.9 + STATOIL -2010080 Rev.0	B T FT	19/03/2024

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	20% NaOH	Specimen in Base Material 3.5 x 20.0 = 70.0 mm²



Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

		Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
Data Ingresso Materiale/ Date of Material Arrival	13/03/2024				
Data Rapporto di prova/ Test Report Date	19/03/2024 firmato elettronicamente/electronically signed	Antonielli Stefano	Amani Paolo		

DECISION RULE:
- Ql — Qualitative
- Qs — Semi-quantitative
- Qn — Quantitative (Implicit Uncertainty)
- Qx — Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.

The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
Witness Review

raccortubi Heat num. or Pcs. marking: 10235A024 - Qty:22.00

Customer: ROSETTI MARINO S.p.A.

Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010

Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

A923A 6215 / 24

Rif. Lab SIM (FCP): **2023 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

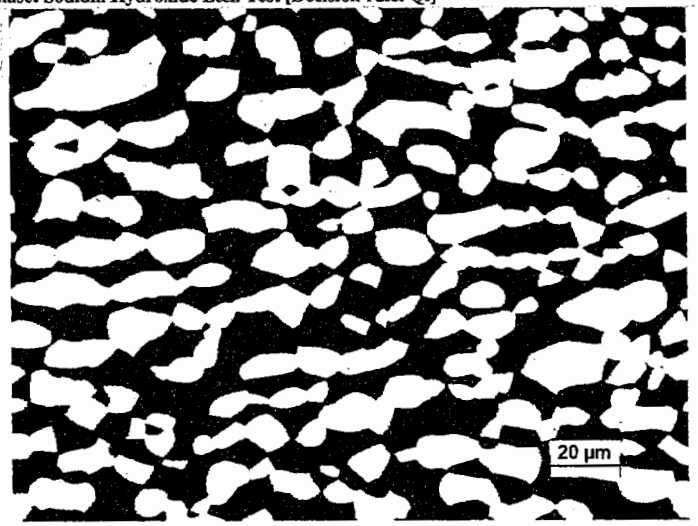
Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	ASTM A 815-23 UNS S32760

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio/ Detecting Detrimental Intermetallic Phase: Sodium Hydroxide Etch Test [Decision rule: QI]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
32965	ASTM A923 – 22 Method A	RTX_D53 Rev.9 + STATOIL -2010080 Rev.0	B T FT	19/03/2024

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	40g NaOH to 100g distilled water	Specimen in Base Material



Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure.

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival **13/03/2024**

Data Rapporto di prova/ Test Report Date **19/03/2024**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer: ROSETTI MARINO Supply Management Dept. Witness Review

DECISION RULE:
- QI → Qualitative
- QS → Semi-quantitative
- QN → Quantitative (Implicit Uncertainty)
- QU → Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment. The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 1023SA024 - Qty:22,00

Customer: ROSETTI MARINO S.p.A.

Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010

Protocol: CTCERC2024000004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

A923C 6215 / 24

Rif. Lab SIM (FCP): **2023 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	**ASTM A 815-23 UNS S32760**

Individuazione di fasi intermetalliche dannose: Prova di corrosione per "pitting" in cloruro ferrico/ Detecting Detrimental Intermetallic Phase: Ferric Chloride Pitting Corrosion Test [Decision rule: Qs]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimensioni/ Dimension mm Lunghezza/ Length	Larghezza/ Width	Spessore/ Thickness	Area/ Area cm²
32964	ASTM A923 – 22 Method C	RTX_D53 Rev.9	B L FT	Meccanica/ Mechanical	54,34	23,55	3,47	31

Condizioni superficiali/ Surface condition: Lavorato/ Machined

Temperatura di prova/ Test temperature (°C): 50

Temperatura Minima Rilevata/ Minimum temperature observed (°C): 49,73

Temperatura Massima Rilevata/ Maximum temperature observed (°C): 50,41

Tempo di esposizione (ore)/ Exposure time (hours): 24

Data inizio/ Initial date	Data fine/ End date
18/03/2024 13:28:14	19/03/2024 13:28:14

Soluzione/ Solution: FeCl3 6% SOLUTION

Peso iniziale/ Initial weight (g)	32,3744	
Peso finale/ Final weight (g)	32,3739	
Perdita di peso/ Weigth loss (g)	0.0005	
Perdita di massa/ Specimen mass loss	0.2	(g/m²)

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X/
NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Velocità di corrosione/ Corrosion speed	(mg/(dm²*d))	1,6
Limite velocità di corrosione (mg/(dm²*d)) max/ Corrosion rate limit (mg/(dm²*d)) max		**10.0**

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival	13/03/2024	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
Data Rapporto di prova/ Test Report Date	19/03/2024 firmato elettronicamente/electronically signed	Antonielli Stefano	Amani Paolo		ROSETTI MARINO Supply Management Dept. Witness Review

DECISION RULE:
- Ql → Qualitative
- Qs → Semi-quantitative
- Qn → Quantitative (Implicit Uncertainty)
- Qi → Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment. The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

raccortubi Heat num. or Pcs. marking: 10235A024 - Qty:22,00

Customer: ROSETTI MARINO S.p.A.

Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

PM 6215 / 24

Rif. Lab SIM (FCP): **2023 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	ASTM A 815-23 UNS S32760

PROVA DI TRAZIONE A TEMPERATURA AMBIENTE/ Tensile test at room temperature [Decision rule: Qn]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Dimensioni/ Dimension With mm	Ø / Width mm	ØPipe mm	Lo (mm)	Posizione di prelievo/ Test position	Temp./ Temp. °C	Snervamento/ Yield strength MPa		MPa	Rottura/ Tensile strength Rm MPa		Allungamento/ Elongation after fracture A (%)		Strizione/ Area Reduction Z (%)	S/R/ Ratio Yield strength / Tensile strength	Data esecuzione/ Date of Testing
32956	ASTM A370 – 23 §6÷14, § A1.3, § A2.2 and § A3.2	Material Standard	3,70	12.40		50.00	B L FT	23.0	(≥550)	Rp0.2% 716		(≥750)	902	(≥25)	31,1			19/03/2024

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival **13/03/2024**

Data Rapporto di prova/ Test Report Date **19/03/2024**

Firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

DECISION RULE:
- Ql — Qualitative
- Qs — Semi-quantitative
- Qn — Quantitative (Implicit Uncertainty)
- Qi — Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.

The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

Cert. to EN 10204 / 3.1

INSPECTION CERTIFICATE

S.P. UNITED INDUSTRY SDN. BHD.

(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Date (日付) : JANUARY 31, 2024

Certificate No. : 24-01-0126
(書類番号)

LRQA CERTIFIED ISO 9001
Approval No:ISO9001-0048008
PED Cert No:0848/PED/FAUM/2018008/2

Order No. : 23SAN007
(注文番号)

LA SOCIETE S.P. UNITED INDUSTRY SDN. BHD. GARANTIT QUE LES PRODUITS OBJET DU PRESENT CERTIFICAT, RESPECTENT EN LEUR TOTALITE LES PRESCRIPTIONS DE L'ARTICLE 15 DE L'ARRETE MINISTERIEL DU 24 MARS 1978, MODIFIE.
C ≤ 0.25%, P ≤ 0.05%, S ≤ 0.05%, R ≤ 800 N/MM², E ≤ 0.9 X R%,
A%(LO=5,65√SO) MIN. 16%. EN LONG. R(A-2) ≥10500 N/MM²

P.O. No. : 806739

Product (形状)	Product Specification (規格)	Specification for Raw Material (材料規格)
STAINLESS STEEL 90 DEG LONG RADIUS ELBOW (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 (ASME SEC II PART A) ASME B16.9-2018 / MSS SP-43-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*	Size (寸法)	Dimension in mm (寸法)		Lot No. (製造番号)	Quantity (数量)	Surface Inspection (外観検査)	Dimension Inspection (寸法検査)	S. P. I. Code No.	Manufacturing Method
		Outside Dia (外径)	Thickness (厚さ)						
1	FBBLR-S316L- 1½"x10S	48.26	2.77	M230731	300	GOOD	GOOD	24311500	COLD FORMED
X 2	FBBLR-S316L- 2"x10S	60.33	2.77	M230234-1	1000	GOOD	GOOD	24312000	COLD FORMED
3	FBBLR-S316L- 5"x10S	141.30	3.40	M230820	15	GOOD	GOOD	24315000	COLD FORMED
4	FBBLR-S316L- 5"x10S	141.30	3.40	M220523	2	GOOD	GOOD	24315000	COLD FORMED

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

	Chemical Composition of Raw Material % (化学成分) (材料)										Mechanical Properties of Raw Material (機械的性質)								
*	Raw Pipe Heat No. (溶解番号)	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100		Type of Specimen (試験片)	YS Mpa (耐力)	TS Mpa (引張強さ)	EL% (伸び) (GL:50mm)	EL% (伸び) Standard (規格値)	Flattening Test (へん平試験)	HT Mpa (水圧試験)	Hardness Test HRB	
1	230628AS08	1.9	45.1	89	34	1	1001	1649	201			253	593	52		GOOD	GOOD	78	
2	220729AT15	1.7	36.2	86	35	1	1005	1625	203			255	591	54		GOOD	GOOD	82	
3	230628AS08	1.9	45.1	89	34	1	1001	1649	201			253	595	54		GOOD	GOOD	79	
4	220406AS09	1.7	36	96.5	30	1	1008	1627	202			254	597	54		GOOD	GOOD	81	
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300			MIN 205	MIN 515	MIN 28					

Remarks * Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, NACE MR0103:2015

ISO 9001-2015/EN 10204-3.1. PED 2014/68/EU ANNEX I SECTION 4.3 INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD.
HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER. PICKLED AND PASSIVATED.
NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION
We certify that the above material has been inspected and tested and complies with the order/contract. This Material (BW Fittings, HS Code 730723), is produced by S.P. United Industry SDN. BHD.
Material here certified does not contain any steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No COUNCIL REGULATION (EU) 2023/1214 of 23 June 2023 and amending Regulation (EU) No 833/2014

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.
(上記の製品は、当該規格及び、で注文の要求事項に適合するてとを証明します。)

Head of QA/QC Dept.
質量/品質管理課長

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 2" SCH.10/S SEAMLESS
raccortubi Heat num. or Pos. marking: M230234-1 - Qty:14.00
Order: 1724000839 - 22.04.24 - Item n.: 260 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020 10
Protocol: CTCERC2024000004695 * CERTIFIED TRUE COPY * Issued 20-05-2024
CTCERT2024000029711.0001

raccortubi Heat num. or Pcs. marking: 1482623 - Qty:15,00

Description: CURVE 90° LR 2" SCH.10/S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 260 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O

Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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Stab. / Plant.: Via Don Spagnoli 5
29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente / **Customer**: RACCORTUBI S.p.A.

Ordine N. / **P.O.N./C.**: Master plan Novembre 2023/2

Pos. N. / Item/Poste: 8 — **Q.tà** / Q.ty/Q.té: 450

(*) Marcatura e cert. N. / Material Marking e Cert. N.: 1482623

Created on: 25-10-2023

Descrizione / Description / Description: ELBOWS 90° LR 2" SCH.10/S SEAMLESS

Specifica / Specification / Spécification: FITTINGS TO ASTM A403/403M-22b
ASME SA403/SA403-21 WP 316/316L
DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: TUBACEX Cert. No.: 741839
Raw material - manufacturer/Materiel du depart - fabriquant:
TUBACEX Cert. No.: 741839

Specifica / Specification/Specification	Colata N. / Heat N. / Couléè N.	N. prova / Specimen N. / Echantil. N.	Snervamento / Yield strength / Limite d'elasticité N/mm2	Rottura / Tensile / Resistance à la traction N/mm2	Allungam. % / Elongation / Allongement	Durezza / Hardness as per NACE MRO1-75	Durezza / Hardnes / Dureté	Resilienza / Impact energy / Resilience Joules
SMLS PIPES TO ASME/ASTM SA/A 312TP 316/316L, DIMS TO ANSI B36.19	59564	P23200629	348	578	50	HRC<22	HRC 5	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. / Heat N. / Couléè N.	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	Nb	Co	N	PRE	FERRITE
59564	0,015	0,56	1,39	0,034	0,0010	16,85	11,25	2,17	0,29	0,003	0,032	0,100	0,0680		

Prove
Tests/Tests

Prova di corrosione A262 Prat. E: Conforme
Corrosion Test A262 Pract. E: In conformity
Essais de corrosion A262 Prat. E: En Conformité

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/EU annex I para 4.3

Materials comply with MESC 76/110 & 76/202.

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication
Formato a freddo / Cold formed / Formés à froid — **Senza saldatura** / Seamless / Sans soudure

Ispezione
Inspection/inspéction
Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1045°C

Solution Annealing at 1045°C , water quenching

Hypertrempés à 1045°C

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur
ROSETTI MARINO
Supply Management Dept.

☐ Witness ☒ Review

Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1" SCH.40/S SEAMLESS
raccortubi Heat num. or Pos. marking: M230689 - Qty:175.00
Order: 1724000839 - 22.04.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024
CTCERT202400001894.1.0001

INSPECTION CERTIFICATE

EN 10204 : 3.1

Certification No. : MCP2401-00015-52

Cert. to RACCORTUBI S.P.A

Order No. : 23TEC005
(注文番号) 00000218 S dtd 30-08-2023

S.P. UNITED INDUSTRY SDN. BHD.
(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Invoice No : SP/FIT24-002

Date (日付) : 04/01/2024

LRQA CERTIFIED ISO 9001

Product	Specification	Specification for Pipe (Raw Material)
STAINLESS STEEL 90 DEG LONG RADIUS ELBOW (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 / ASME B16.9-2018 MSS SP-43-2019 / ASME BPVC II PART A-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*	Size	Dimension in mm		Lot No.	Quantity	Surface Inspection	Dimension Inspection	Manufacturing Method	Item Reference No.
		Outside Dia	Thickness						
1	1" X 40S	33.4	3.38	M230689	500	PASSED	PASSED	COLD FORMED	N/A

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

Chemical Composition of Pipe (Raw Material) %											Mechanical Properties of Pipe (Raw Material)								
*	Heat No.	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100		Type of Specimen	YS Mpa	TS Mpa	EL% (GL:50mm)		Flattening Test	HT Mpa		Hardness Test HRB
1	230216AT17	1.4	35.1	99.8	35	2	1005	1629	201		Longitudinal	253	592	53		PASSED	-		79
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300			MIN 205	MIN 515	MIN 28					

* Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, NACE MR0103:2015. ISO 9001-2015/EN 10204-3.1. PED 2014/68/EU ANNEX I SECTION 4.3 INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD. HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER. PICKLED AND PASSIVATED.
NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.

We certify that the above material has been inspected and tested and complies with the order/contract. This Material (BW Fittings, HS Code 730723), is produced by S.P. United Industry SDN. BHD.
Material here certified does not contain any steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No COUNCIL REGULATION (EU) 2023/1214 of 23 June 2023 and amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilizing the situation in Ukraine.

OTHERS:	DESCRIPTION :
N/A	N/A

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.

Head of QA/QC Dept.

ROSETTI MARINO
Supply Management Dept.
Witness ☑ Review

raccortubi Heat num. or Pos. marking: 1519623 - Qty:45,00

Description: CURVE 90° LR 1" SCH.40/S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O

Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5
29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente Customer	RACCORTUBI S.p.A.
Ordine N. P.O.N./C.	Master plan Dicembre 2023/2
Pos. N. Item/Poste	6
Q.tà Q.ty/Q.té	979

(*) Marcatura e cert. N. 1519623 — Created on: 20-11-2023
Material Marking e Cert. N.

Descrizione Description Description	ELBOWS 90° LR 1" SCH.40/S SEAMLESS
Specifica Specification Spécification	FITTINGS TO ASTM A403/403M-22b ASME SA403/SA403-21 WP 316/316L DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: ALLEIMA Cert. No.: A/22-123648 Rev 00
Raw material - manufacturer/Materiel du depart - fabriquant:
ALLEIMA Cert. No.: A/22-123648 Rev 00

Specifica Specification/Specification	Caratteristiche meccaniche Mechanical Properties/Caracteristiques Mechaniques							
	Colata N. Heat N. Coulée N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement	**Durezza** Hardness as per NACE MR01-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
SMLS PIPES TO ASME/ASTM SA/A 312TP 316/316L, DIMS TO ANSI B36.19	565957	50173	300	622	52	HRC<22	HRC 8	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Coulée N.	C	Si	Mn	P	S	Cr	Ni	Mo	Co	Cu	N			PRE	FERRITE
565957	0,011	0,43	1,71	0,029	0,008	16,78	11,22	2,03	0,11	0,28	0,074				

Prove
Tests/Tests

Prova di corrosione A262 Prat. E: Conforme
Corrosion Test A262 Pract. E: In conformity
Essais de corrosion A262 Prat. E: En Conformité

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/EU annex I para 4.3

Materials comply with MESC 76/110 & 76/202.

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS ACC. TO ASTM A380
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication

Formato a freddo	**Senza saldatura**
Cold formed	Seamless
Formés à froid	Sans soudure

Ispezione
Inspection/inspéction
Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1045°C

Solution Annealing at 1045°C , water quenching

Hypertrempés à 1045°C

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur
ROSETTI MARINO
Supply Management Dept.

☐ Witness ☒ Review

raccortubi Heat num. or Pos. marking: M230735 - Qty:56,00
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 4" SCH.10/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 290 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000010
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024
CTCERT20240001932.1.0001

INSPECTION CERTIFICATE

EN 10204 : 3.1

Certification No. : MCP2401-00015-19

Cert. to RACCORTUBI S.P.A

Order No. : 23TEC003
(注文番号) 00000164 S dtd 27-06-2023

S.P. UNITED INDUSTRY SDN. BHD.

(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Invoice No : SP/FIT24-002

Date (日付) : 04/01/2024

LRQA CERTIFIED ISO 9001

Product	Specification	Specification for Pipe (Raw Material)
STAINLESS STEEL 90 DEG LONG RADIUS ELBOW (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 / ASME B16.9-2018 MSS SP-43-2019 / ASME BPVC II PART A-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*	Size	Dimension in mm		Lot No.	Quantity	Surface Inspection	Dimension Inspection	Manufacturing Method	Item Reference No.
		Outside Dia	Thickness						
1	4" X 10S	114.3	3.05	M230735	324	PASSED	PASSED	COLD FORMED	N/A

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

Chemical Composition of Pipe (Raw Material) %

*	Heat No.	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100	
1	230216AT17	1.4	35.1	99.8	35	2	1005	1629	201	
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300	

Mechanical Properties of Pipe (Raw Material)

Type of Specimen	YS Mpa	TS Mpa	EL% (GL:50mm)		Flattening Test	HT Mpa		Hardness Test HRB
Longitudinal	251	591	51		PASSED	-		79
	MIN 205	MIN 515	MIN 28					

* Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, NACE MR0103:2015. ISO 9001-2015/EN 10204-3.1. PED 2014/68/EU ANNEX I SECTION 4.3 INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD.
HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER. PICKLED AND PASSIVATED.
NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.

We certify that the above material has been inspected and tested and complies with the order/contract. This Material (BW Fittings, HS Code 730723), is produced by S.P. United Industry SDN. BHD.
Material here certified does not contain any steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No COUNCIL REGULATION (EU) 2023/1214 of 23 June 2023 and amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilizing the situation in Ukraine.

OTHERS:	DESCRIPTION :
N/A	N/A

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.

Head of QA/QC Dept.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

PTD 204334,JALAN PLATINUM UTAMA,

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZONE 12B, 81700 PASIR GUDANG

JOHOR DARUL TAKZIM, MALAYSIA

Tel: +607-2518888 Fax: +607-2519999 Website: www.pantechssalloy.com

http:// www.pantech-group.com

NSF Certified to NSF/ANSI 61

LRQA CERTIFIED ISO 9001 Approval No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO. : 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Raccortubi S.p.A

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-47143

Date : 2 Oct 2023

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
00000165 S	E000005894	ASTM A403/A403M - 22 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 23 / ASME SA 960/SA960M - 21 / ASME SECTION II PART A-2021	Solution Treated, Pickled-Passivated

Heat No.	Product & Size	Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
LN010-1	6" SCH 10s 90° LR ELBOW	181	WP316/316L-S	PASSED	NY220903AS05
MN041-1	6" SCH 10s 90° LR ELBOW	70	WP316/316L-S	PASSED	NY230412AV04
GTA070-01-103LR	6" SCH 10s 90° LR ELBOW	49	WP316/316L-S	PASSED	D170725

Specification	Chemical Composition (%)										Tensile Test *1			Hardness	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS (KSI / MPa)	TS (KSI / MPa)	E (%)	(HRB)	
Max															
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-		-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
LN010-1	0.017	0.44	0.89	0.031	0.001	16.60	10.01	2.08	< 0.01		260	585	57	70	PASSED
MN041-1	0.021	0.37	0.88	0.033	0.001	16.26	10.20	2.02	< 0.01		306	618	57	76	PASSED
GTA070-01-103LR	0.021	0.39	1.09	0.036	0.001	16.75	11.08	2.05	< 0.01		225	550	48	72	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER, AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-22 STANDARD. SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE. LONGITUDINAL DIRECTION. GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD + VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-15 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156-2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT

Pantech Stainless & Alloy Industries Sdn. Bhd.
200601013677 (733428-W)
PTD 204334, Jalan Platinum Utama,
Kawasan Perindustrian Pasir Gudang, Zon 12B,
81700 Pasir Gudang, Johor.
Tel: +607-251 8888 Fax: +607-251 9999

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. QAQC MANAGER HASSANUDDIN

Head of Quality Assurance Department

ROSETTI MARINO
Supply Management Dep.
Business Review

Form :FQA-030b R.6; 04-03-2022

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 300 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: CURVE 90° LR 6" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: GTA070-01-103LR - Qty:24,00

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

raccortubi Heat num. or Pcs. marking: M230630 - Qty:12,00
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 10" SCH.10/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 310 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024
CTCERT20230004631.1.0001

Cert. to RACCORTUBI S.P.A

Order No. : 23TEC001
(注文番号) 00000016 S dtd 26-01-2023

INSPECTION CERTIFICATE
EN 10204 : 3.1
S.P. UNITED INDUSTRY SDN. BHD.

(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Certification No. : MCP2310-00002-18

Invoice No : SP/FIT23-103

Date (日付) : 26/09/2023

LRQA CERTIFIED ISO 9001

Product	Specification	Specification for Pipe (Raw Material)
STAINLESS STEEL 90 DEG LONG RADIUS ELBOW (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 / ASME B16.9-2018 MSS SP-43-2019 / ASME BPVC II PART A-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*	Size	Dimension in mm		Lot No.	Quantity	Surface Inspection	Dimension Inspection	Manufacturing Method	Item Reference No.
		Outside Dia	Thickness						
1	10" X 10S	273.05	4.19	M230630	30	PASSED	PASSED	COLD FORMED	N/A

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

Chemical Composition of Pipe (Raw Material) %											Mechanical Properties of Pipe (Raw Material)								
*	Heat No.	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100		Type of Specimen	YS Mpa	TS Mpa	EL% (GL:50mm)		Flattening Test	HT Mpa		Hardness Test HRB
1	230216AT17	1.4	35.1	99.8	35	2	1005	1629	201		Longitudinal	250	591	52		PASSED	PASSED		79
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300			MIN 205	MIN 515	MIN 28					

* Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, NACE MR0103:2015. ISO 9001-2015/EN 10204-3.1. PED 2014/68/EU ANNEX I SECTION 4.3 INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD. HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER. PICKLED AND PASSIVATED.
NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.

We certify that the above material has been inspected and tested and complies with the order/contract. The material is manufactured in SPI and melting country of raw material are in Malaysia or China or Taiwan origin (attached)
Material here certified does not contain any steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No COUNCIL REGULATION (EU) 2023/1214 of 23 June 2023 and amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilizing the situation in Ukraine.

OTHERS:	DESCRIPTION :
N/A	N/A

ROSETTI MARINO
Supply Management Dept.
Business Review

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.

Head of QA/QC Dept.

raccortubi Heat num. or Pcs. marking: 1018SA019 - Qty:2,00

Description: RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 320 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010

Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5 - 29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente Customer/ RACCORTUBI S.p.A.

Ordine N. P.O.N./C.N. OF06523 del 27/11/2018

Pos. N. Item/Poste 21 **Q.tà** Q.ty/Q.té 429

(*) Marcatura e cert. N. Material Marking e Cert. N. 1018SA019 **Data:** Date: 25-01-2019

Descrizione Description Description CONC.REDS 2"x1.1/2" SCH.10S/40S

Specifica Specification Spécification BW FITTINGS TO ASTM A/815M-14e1
ASME SA/815M ed.17 UNS S32760
DIMS/ENDS B16.9-2012

Materiale base - Fabbricante: SALZGITTER MANNESMANN STAINLESS TUBES Cert. No.: 3-17-00488-rev.01
Raw material - manufacturer/Materiel du depart - fabriquant: SMLS PIPES TO ASTM A-790 UNS S32760
SALZGITTER MANNESMANN STAINLESS TUBES Cert. No.: 3-17-00488-rev.01

Test produzione / Production test/Coupon de production	Caratteristiche meccaniche / Mechanical Properties/Caracteristiques Mechaniques							
Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS	**Colata N.** Heat N. Couléè N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement 2"	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
QTR: 01/SDSS/A Rev.4 Specimens location drawing as per relevant QTR	A14581	848/18	584	804	30.5	HRC<28	HRC 24	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Couléè N.	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**Mo**	**N**	**Cu**	**W**			**PRE**	**FERRITE**
A14581	0,023	0,33	0,46	0,025	0,0004	25,74	7,09	3,67	0,250	0,61	0,55			41.85	47.6

Prove
Tests/Tests

Altri Others Autres G-48 MET.A

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/UE annex I para 4.3
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTORY
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262 Pr E
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.:1787/19
- MATERIAL AND TESTS ACCORDING TO M-630 REV.6 - MDS D53 REV.5
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT WITH RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication
Formato a freddo Cold formed Formés à froid
Senza saldatura Seamless Sans soudure

Ispezione
Inspection/inspéction
Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1130°C

Solution Annealing at 1130°C , water quenching

Hypertrempés à 1130°C

Heat treatment soaking time for 20 minutes, batch n. 0912

Guaranteed caracteristics (A.M. du 24.03.78)
Caracteristiques garanties pour Z2CN18-10 et Z2CND17-13
C <= 0.25% Rm <= 760 N/mm2
S <= 0.05% Rm(A-2) <= 10500 N/mm2
P <= 0.05% A% sur 5,65 sqrt(So) >= 16

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica Trade Mark

Ispettore
Inspector/Inspecteur

ROSETTI MARINO
Supply Management Dept.

Witness Review

297/996

raccortubi Heat num. or Pos. marking: 1018SA019 - Qty:2,00
Customer: ROSETTI MARINO S.p.A.
Description: RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 320 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000201O
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

SIDER TEST Srl
Mechanical and Chemical Laboratory Non Destructive Tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it
www.sidertest.it *Your Strategic Partner in Material Testing!*

RAPPORTO DI PROVA/TEST REPORT

G48ACE 1787 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1963**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 2" W.T. 3.91 mm	1		848/18	A14581	**ASTM A 815-17 UNS S32760**

Prova di "pitting" in ferro-cloruro/ Ferric chloride pitting test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Lunghezza/ Length mm	Larghezza/ Width mm	Spessore/ Thickness mm	Area/ Area cm²	
8173	ASTM G 48-11(2015) - Met. A	RTX_D53 Rev.7	B L FT	Meccanica/ Mechanical	49,05	24,52	3,69	29,48	[(LxWx2)+(WxTx2)+(LxTx2)] / 100

Temperatura di prova (°C)/ Test temperature (°C) 50

Tempo di esposizione (ore)/ Exposure time (hours) 24

Data e ora inizio/ Initial date and time	Data e ora fine/ End date and time
29/01/2019 13:30:00	30/01/2019 13:30:00

Soluzione/ Solution FeCl3 - 6H2O 10% WATER SOLUTION

Peso Iniziale/ Initial weight (g)	35,6960	
Peso finale (g)/ Final weight (g)	35,6951	
Perdita di peso (g)/ Weigth loss (g)	0,0009	
Perdita di massa/ Specimen mass loss	0,3053	g/m²
Limite perdita di massa max/ Limit Specimen mass loss max	**4,0**	**g/m²**

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X / NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata/ Examined area cm² 24,05 (LxWx2)/100

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta /Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval.

Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
28/01/2019	Antonielli Stefano	Amani Paolo		
Data Rapporto di prova/ Test Report Date 31/01/2019				

Firmato elettronicamente/electronically signed

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness: [L]-long.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review 256/956

raccortubi Heat num. or Pcs. marking: 10185A019 - Qty:2,00
Customer: ROSETTI MARINO S.p.A.
Description: RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 320 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

SIDER TEST Srl
Mechanical and Chemical Laboratory Non Destructive Tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it
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RAPPORTO DI PROVA/TEST REPORT

E562 1787 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1963**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 2" W.T. 3.91 mm	1		**848/18**	**A14581**	**ASTM A 815-17 UNS S32760**

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti/ Determining volume fraction by systematic manual point count

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position			Preparazione provino/ Specimen preparation	Ingrandimento/ Enlargement	Misura del reticolo/ Grid size	Data esecuzione/ Date of Testing
8169	ASTM E 562-11	RTX_D53 Rev.7 + STATOIL -2010080 Rev.0	B	T	FT	20% NaOH	500 X	40 mm x 40 mm 5 x 5 = 25 Points	31/01/2019

		Valore Min/ Value Min	Valore Max/ Value Max
Ferrite Vv (% Frazione di volume)/ Vv(% Volume Fraction)	47.6 ± 1.2	**40**	**55**
% Errore (RA)/ % Error (RA)	2,52		
Deviazione Standard/ Standard Deviation	3,2		
Nr. di campi per provino/sezione/spaziatura/angolo/ Nr. of fields for specimens/section/angle	30 / 5 x 20 mm / 1 x 3.0 mm / 45°		

Ferrite % Frazione di volume per ciascun campo esaminato/ % Volume Fraction for each metallographic section

1	**50**	2	**46**	3	**50**	4	**42**	5	**48**
6	**48**	7	**52**	8	**42**	9	**50**	10	**44**
11	**50**	12	**48**	13	**48**	14	**44**	15	**46**
16	**48**	17	**52**	18	**44**	19	**52**	20	**46**
21	**48**	22	**48**	23	**52**	24	**52**	25	**48**
26	**42**	27	**50**	28	**42**	29	**48**	30	**48**

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

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Data Ingresso Materiale/ Date of Material Arrival **28/01/2019**

Data Rapporto di prova/ Test Report Date **31/01/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy

Antonielli Stefano

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy

Amani Paolo

Ispettori/Inspector

Cliente/Customer

Test Position Legend: [B]-Specimen In Base Material; [FT]-full thickness; [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
29/5/98 Review

raccortubi Heat num. or Pcs. marking: 1018SA019 - Qty:2,00
Customer: ROSETTI MARINO S.p.A.
Description: RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 320 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
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RAPPORTO DI PROVA/TEST REPORT

ANL 1787 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1963**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 2" W.T. 3.91 mm	1		**848/18**	**A14581**	**ASTM A 815-17 UNS S32760**

ANALISI SPETTROMETRICA AD EMISSIONE ATOMICA SOTTOVUOTO/ Atomic emission vacuum Spectrometric analysis

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Temperatura di prova (°C)/ Test temperature (°C)	ID Gruppo / Group ID	Data esecuzione/ Date of Testing
8176	ASTM E 1086-14	RTX_D53 Rev.7 + STATOIL -2010080 Rev.0	B UP	20	7237	29/01/19

			%	Min.	Max.				%	Min.	Max.				%	Min.	Max.
C	**0,025**	**± 0,002**	97,5		0,030	**Nb**						**Fe**					
Si	**0,35**	**± 0,01**	97,5		1,00	**Ti**						**Ca**					
Mn	**0,47**	**± 0,02**	97,5		1,00	**W**	**0,59**	**± 0,06**	95,0	0,50	1,00	**Ta**					
P	**0,027**	**± 0,003**	97,5		0,030	**Pb**						**Sb**					
S	**0,002**	**± 0,001**	97,5		0,010	**Sn**						**H**					
Cr	**25,6**	**± 0,4**	95,0	24,0	26,0	**As**						**Cd**					
V						**B**						**Se**					
Mo	**3,5**	**± 0,1**	95,0	3,0	4,0	**N**	**0,25**	**± 0,04**	95,0	0,20	0,30	**Bi**					
Ni	**7,2**	**± 0,1**	95,0	6,0	8,0	**La**						**Hg**					
Cu	**0,63**	**± 0,02**	95,0	0,50	1,00	**Mg**											
Ce						**Zr**											
Al						**Zn**											
Co						**O**											

FORMULAS			%	Min.	Max.
PREN	**41,2**	**± 0,4**	97,5	40,0	

Decision rule:
the result is "Compliant to Specification" when:
- *Result ≥ Lower Limit (confidence interval CI=50÷97.5 %)*
- *Result ≤ Upper Limit (confidence interval CI=50÷97.5 %)*
- *Lower Limit ≤ Result ≤ Upper Limit (confidence interval CI=47,5÷95%)*

When the result falls within the uncertainty range at the limit value, the result can be Probably Compliant or Probably Not Compliant

Expanded uncertainty below reported is based on standard uncertainty multiplied by a coverage factor k = 2 that corresponds to a coverage probability of about 95% for a normal distribution. The evaluation is based on EA 4/16 Ed. 2003

Note/ Remarks

Esito/ Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

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Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
28/01/2019	*Antonielli Stefano*	*Amani Paolo*		
Data Rapporto di prova/ Test Report Date **31/01/2019** firmato elettronicamente/electronically signed				

Test Position Legend: : [B]-Specimen in Base Material: [UP]-External sup.

ROSETTI MARINO
Supply Management Dept.
Witness Review

raccortubi Heat num. or Pcs. marking: 1018SA019 - Qty:2,00

Customer: ROSETTI MARINO S.p.A.

Description: RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 320 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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RAPPORTO DI PROVA/TEST REPORT

DUR 1787 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1963**

Campione fornito da cliente/Sample supplied by the Customer :

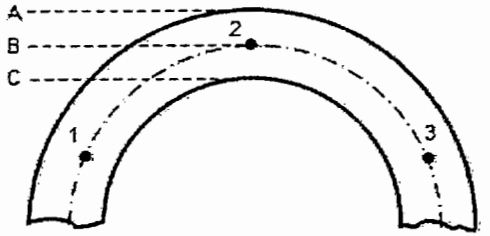
Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 2" W.T. 3.91 mm	1		**848/18**	**A14581**	**ASTM A 815-17 UNS S32760**

PROVA DI DUREZZA HBW (Strumento di misura dell'impronta di Tipo A)/ HBW hardness test (Indentation measuring device Type A)

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position		Durezza/ Hardness	Data esecuzione/ Date of Testing
8168	ASTM E 10-17	RTX_D53 Rev.7	B	T	HBW 2.5/187.5	29/01/2019

(B1) - Base Material **MAX 270**

1 249 2 241 3 247



AB=BC= 1/2 AC

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

Position	Average	StdDev
(B1) - Base Material	245,6	4.1

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.

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Data Ingresso Materiale/ Date of Material Arrival **28/01/2019**

Data Rapporto di prova/ Test Report Date **31/01/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material: [SZ]-along the thickness; [T]-trasv.

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☑ Review

30/10/96

raccortubi Heat num. or Pos. marking: 1018SA019 - Qty:2,00
Customer: ROSETTI MARINO S.p.A.
Description: RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 320 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
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MIC 1787 / 19

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Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1963**

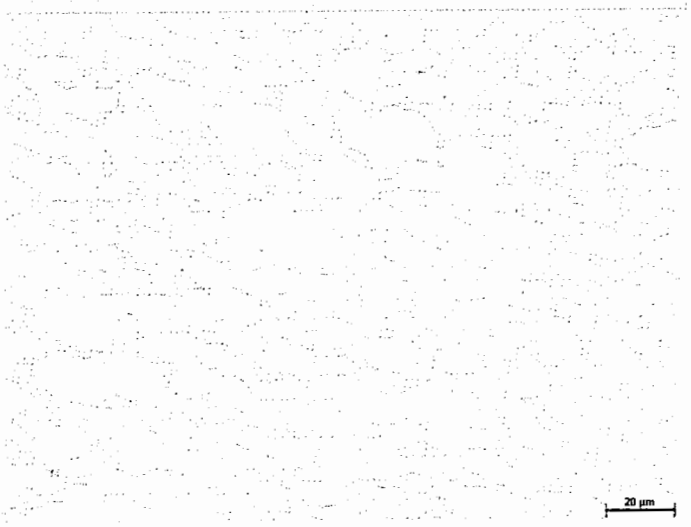
Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 2" W.T. 3.91 mm	1		**848/18**	**A14581**	**ASTM A 815-17 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
8170	ASTM E 3-11(2017)+ASTM E 407-07(2015)e1	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	31/01/2019

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	10% Oxalic	Materiale base / Base Material
		5.0 x 20.0 = 100.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da nitruri. / Structure free from nitrides.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Rapporto di prova/ Test Report Date	31/01/2019	*Antonielli Stefano*	*Amani Paolo*		

firmato elettronicamente/electronically signed

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness: [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

raccortubi Heat num. or Pcs. marking: 1018SA019 - Qty:2,00

Customer: ROSETTI MARINO S.p.A.

Description: RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 320 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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RAPPORTO DI PROVA/TEST REPORT

MIC 1787 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

LAB N° 0864 L

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Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1963**

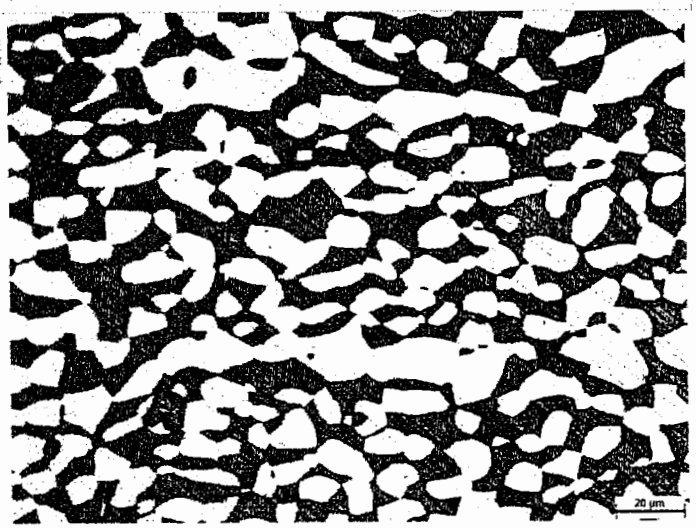
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SACRIFICAL PIECE 2" W.T. 3.91 mm	1		**848/18**	**A14581**	**ASTM A 815-17 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
8171	ASTM E 3-11(2017)+ASTM E 407-07(2015)e1	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	31/01/2019

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	20% NaOH	Materiale base / Base Material
		5.0 x 20.0 = 100.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano, fasi intermetalliche e precipitati./Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 1018SA019 - Qty:2,00
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RAPPORTO DI PROVA/TEST REPORT

A923A 1787 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

LAB N° 0864 L

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Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1963**

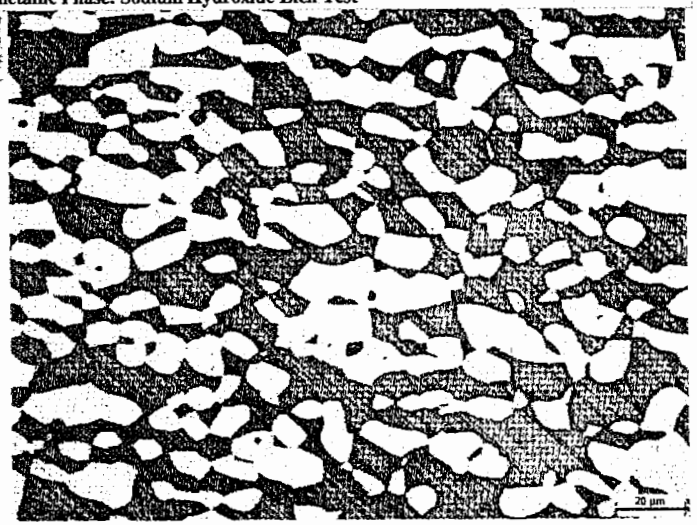
Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 2" W.T. 3.91 mm	1		**848/18**	**A14581**	**ASTM A 815-17 UNS S32760**

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio/ Detecting Detrimental Intermetallic Phase: Sodium Hydroxide Etch Test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
8175	ASTM A 923-14 (Met. A)	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	31/01/2019

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	40g NaOH to 100g distilled water	Materiale base / Base Material



Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure.

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano, fasi intermetalliche e precipitati./Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta /Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval.

		Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
Data Ingresso Materiale/ Date of Material Arrival	**28/01/2019**				
Data Rapporto di prova/ Test Report Date	**31/01/2019**	*Antonielli Stefano*	*Amani Paolo*		

Firmato elettronicamente/electronically signed

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

304/696

raccortubi Heat num. or Pos. marking: 1018SA019 - Qty:2,00

Customer: ROSETTI MARINO S.p.A.

Description: RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 320 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000010

Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

SIDER TEST Srl

Mechanical and Chemical Laboratory Non Destructive Tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it
www.sidertest.it *Your Strategic Partner in Material Testing!*

RAPPORTO DI PROVA/TEST REPORT

A923C 1787 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1963**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 2" W.T. 3.91 mm	1		**848/18**	**A14581**	**ASTM A 815-17 UNS S32760**

Individuazione di fasi intermetalliche dannose: Prova di corrosione per "pitting" in cloruro ferrico/ Detecting Detrimental Intermetallic Phase: Ferric Chloride Pitting Corrosion Test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Lunghezza/ Length mm	Larghezza/ Width mm	Spessore/ Thickness mm	Area/ Area cm²
8174	ASTM A 923-14 (Met. C)	RTX_053 Rev.7	B L FT	Meccanica/ Mechanical	51,36	24,11	3,9	30.65

Temperatura di prova (°C)/ Test temperature (°C) 50

Temperatura Minima Rilevata (°C)/ Minimum specimen preparation (°C) 49,22

Temperatura Massima Rilevata (°C)/ Maximum specimen preparation (°C) 50,58

Tempo di esposizione (ore)/ Exposure time (hours) 24

Data inizio/ Initial date	Data fine/ End date
29/01/2019 13:30:00	30/01/2019 13:30:00

Soluzione/ Solution FeCl3 · 6H2O 10% water solution

Peso iniziale/ Initial weight (g) 38,6505

Peso finale (g)/ Final weight (g) 38,6494

Perdita di peso (g)/ Weigth loss (g) 0,0011

Velocità di corrosione/ Corrosion speed (mg/(dm²*d)) **3,6**

Limite velocità di corrosione (mg/(dm²*d)) max./ Corrosion rate limit (mg/(dm²*d)) max. **10,0**

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.

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Data Ingresso Materiale/ Date of Material Arrival **28/01/2019**

Data Rapporto di prova/ Test Report Date **31/01/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness; [L]-long.

ROSETTI MARINO
Suoply Management Dept.
witness Review

raccortubi Heat num. or Pcs. marking: 10185A019 - Qty:2,00
Customer: ROSETTI MARINO S.p.A.
Description: RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 320 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

SIDER TEST Srl
Mechanical and Chemical Laboratory Non Destructive Tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it
www.sidertest.it *Your Strategic Partner in Material Testing!*

RAPPORTO DI PROVA/TEST REPORT

PM 1787 / 19

Rif. Lab SIM (FCP) : **565 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF06523**

Commessa/Job **259/18- 18/1963**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 2" W.T. 3.91 mm	1		**848/18**	**A14581**	**ASTM A 815-17 UNS S32760**

PROVA DI TRAZIONE A TEMPERATURA AMBIENTE/ Tensile test at room temperature

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Dimensioni/ Dimension Wth	Ø / Width	ØPipe	Lo/ Lo	Posizione di prelievo/ Test position	Temp./ Temp.	Snervamento/ Yield strength		Rottura/ Tensile strength Rm		Allungamento/ Elongation	Strizione/ Area Reduction	S/R/ Ratio Yield strength / Tensile strength	Data esecuzione/ Date of Testing
			mm					°C	Mpa		Mpa		A (%)	Z (%)		
8166	ASTM A 370-17a (Tension Test)	RTX_D53 Rev.7	4,08	12,45		50,00	B T FT	23	(≥550) Rp0.2%	**584**	(750÷895)	**804**	(≥25) **30,5**			30/01/2019

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
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Data Ingresso Materiale/ Date of Material Arrival **28/01/2019**

Data Rapporto di prova/ Test Report Date **31/01/2019**

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

ernefittings
erne fittings gmbh
A-5824 Schlins
Hauptstrasse 48
Austria/Europe
Telefon +43/5524 501-0
Telefax +43/5524 501-930
Reg.-No. 12 109 3054

Abnahmeprüfzeugnis
Inspection Certificate
EN 10204 - 3.1

Artikelbezeichnung *[designation]*
reducers
KO-S-WP316/316L-4"/3"-S10S

Zeugnis Nr. *[cert. no.]* 053193/14-HG | **Rev.** | **Datum** *[date]* 15/12/2014

Code-Nr. *[code no.]* ECC26 | **Ident Nr.** *[ident no.]*

Kunde *[customer]* [redacted]

Unsere Auftrags.Nr./Art.Nr. *[our order no./item no.]* 168081RT-0230 / 108099

Ihre Bestell Nr. *[your order no.]* LS100/SR40046

Menge *[quantity]* 49

Anforderungen der Bestellung *[requirements of the order]* ASME B16.9-2012, material:WP 316/316L-S, TR-fitting:ASTM A 403/A 403M-13a, ASME SA-403/SA-403M-13, TR-addit fitting:NACE MR0175/ISO15156-3:2009, A.1.5 und A.2 NACE MR0103-2012, 2.5 und 4, certificate:EN 10204/3.1 +BC, surface quality:Pickled, PMI:100% spectral, execution:Seamless

Vormaterial *[base material]*: Rohrzeugnisnr. *[tube work's cert.no.]* 591471

Hersteller *[manufacturer]*: SBS

Dichtheitsprüfung *[leakage test]*: Bar 55

Analyse *[analysis]*: Schmelze Nr. [heat code] | Erschmelzungsart *[melting process]*: EF+AOD | 1 = Schmelzanalyse *[heat analysis]*

J-Faktor *[J-Factor]*: (Si + Mn) * (P + Sn) * 10000

CEQ *[CEQ]*: C + (Mn / 6) + (Cr + Mo + V) / 5 + (Cu + Ni) / 15

Index		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Nb	B	N
1	47504	0.016	0.45	1.41	0.028	0.001	17.00	2.16	11.20	0.30	0.016	0.0013	0.0625

Mech.-technologische Prüfung *[mech. technological test]*

Proben Nr. *[test no.]*	Zugversuch *[tensile test]* Pr.-Lage *[pos. of sample]*	Temp.	Dehngr. *[yield str.]* Rp 0,2	Rp 1,0	Zugfestigkeit [tensile str.] Rm (MPa)	Dehnung *[elongation]* 2" (%)	Kerbschlagbiegeversuch *[notched bar impact test]* Form: PR-Lage *[pos. of sample]*	Temp.	Querschnitt *[cross sec.]* (mm²)	Kerbschlagarbeit *[impact values]* (J)
224531	L	+20 °C	264	297	547	53				

Härteprüfung *[hardness test]*: 140-145 HB

Wärmebehandlung *[heat treatment]*: solution annealed, temperature 1050 °C, Cooling in water

Einsatzrohr *[basematerial]*

Kennzeichnung *[marking]*: CE QS AUSTRIA / WP316/316L-S / ECC26 / 4" / 3" / S10S

Zusatzmarkierung *[add. mark.]*

Besichtigung und Ausmessung *[visual inspection and dimensional check]*: o.B./o.K.

Bemerkungen *[remarks]*
cold formed
Intergranular corrosion test acc. ASTM A262/E: o.k., PMI 100% spectral: o.k.

Die gelieferten Produkte erfüllen die in der Bestellung festgelegten Anforderungen. *[The products supplied are in compliance with the requirements of the order].*
The products were manufactured, sampled, tested and inspected in accordance with the specifications and were found to meet the requirements.

Abnahmebeauftragter [inspection representative]
15/12/14 Grabherr Harald ☎ - 321

Dieses Dokument wurde elektronisch erstellt und ist ohne Unterschrift gültig. *[The certificate is issued by the computerized system and is valid without signature.]*

Zertifiziert nach DGRL 97/23/EG Anhang I - Absatz 4.3 durch TÜV SÜD Industrie Service, Benannte Stelle 0036,Zertifikat Nr. 129/2002/MUC *[Certified acc. to PED 97/23/EG Annex I, Paragraph 4.3 by TÜV SÜD Industrie Service, Notified Body 0036, Certificate No. 129/2002/MUC]*

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

raccortubi Heat num. or Pos. marking: ECC26 - Qty:1,00

Customer: ROSETTI MARINO S.p.A.

Description: RID. CONC. 4"x3" SCH.10/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 330 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O

Protocol: CTCERC20240000469S * CERTIFIED TRUE COPY * Issued 20-05-2024

Customer: ROSETTI MARINO S.p.A.

Description: RID. CONC. 1"x1/2" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: MR230847 - Qty:14,00

Order: 1724000839 - 22.04.24 - Item n.: 340 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020 10

Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

CTCERT20240001954.1.0001

INSPECTION CERTIFICATE

EN 10204 : 3.1

Cert. to RACCORTUBI S.P.A

Order No. : 23TEC004
(注文番号) 00000211 S dtd 04-08-2023

S.P. UNITED INDUSTRY SDN. BHD.
(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Certification No. : MCP2401-00015-46

Invoice No : SP/FIT24-002

Date (日付) : 04/01/2024

LRQA CERTIFIED ISO 9001

Product	Specification	Specification for Pipe (Raw Material)
STAINLESS STEEL CONCENTRIC REDUCER (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 / ASME B16.9-2018 / MSS SP-43-2019 / ASME BPVC II PART A-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*	Size	Dimension in mm		Lot No.	Quantity	Surface Inspection	Dimension Inspection	Manufacturing Method	Item Reference No.
		Outside Dia	Thickness						
1	1" x ½" X 40S	33.40 X 21.34	3.38 X 2.77	MR230847	50	PASSED	PASSED	COLD FORMED	N/A

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

Chemical Composition of Pipe (Raw Material) %

*	Heat No.	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100	
1	230216AT17	1.4	35.1	99.8	35	2	1005	1629	201	
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300	

Mechanical Properties of Pipe (Raw Material)

Type of Specimen	YS Mpa	TS Mpa	EL% (GL:50mm)		Flattening Test	HT Mpa		Hardness Test HRB
Longitudinal	253	592	53		PASSED	-		79
	MIN 205	MIN 515	MIN 28					

* Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, NACE MR0103:2015. ISO 9001-2015/EN 10204-3.1. PED 2014/68/EU ANNEX I SECTION 4.3 INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD. HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER. PICKLED AND PASSIVATED.
NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.

We certify that the above material has been inspected and tested and complies with the order/contract. This Material (BW Fittings, HS Code 730723), is produced by S.P. United Industry SDN. BHD.
Material here certified does not contain any steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No COUNCIL REGULATION (EU) 2023/1214 of 23 June 2023 and amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilizing the situation in Ukraine.

OTHERS:	DESCRIPTION :
N/A	N/A

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.

Head of QA/QC Dept.

ROSETTI MARINO
Supply Management Dept.
Witness Review

Customer: ROSETTI MARINO S.p.A.

Description: RID. CONC. 1"x3/4" SCH.40/S SEAMLESS

raccortubi Heat num. or Pos. marking: MR230609 - Qty:15.00

Order: 1724000839 - 22.04.24 - Item n.: 350 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000210

Protocol: CTCERC2024000469S * CERTIFIED TRUE COPY * Issued 20-05-2024

CTCERT2024000191 2.1.0001

INSPECTION CERTIFICATE

EN 10204 : 3.1

Certification No. : MCP2401-00015-16

Cert. to RACCORTUBI S.P.A

Order No. : 23TEC002
(注文番号) 00000126 S dtd 11-05-2023

S.P. UNITED INDUSTRY SDN. BHD.

(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Invoice No : SP/FIT24-002

Date (日付) : 04/01/2024

LRQA CERTIFIED ISO 9001

Product	Specification	Specification for Pipe (Raw Material)
STAINLESS STEEL CONCENTRIC REDUCER (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 / ASME B16.9-2018 / MSS SP-43-2019 / ASME BPVC II PART A-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*	Size	Dimension in mm		Lot No.	Quantity	Surface Inspection	Dimension Inspection	Manufacturing Method	Item Reference No.
		Outside Dia	Thickness						
1	1" x ¾" X 40S	33.40 X 26.67	3.38 X 2.87	MR230609	25	PASSED	PASSED	COLD FORMED	N/A

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

Chemical Composition of Pipe (Raw Material) %											Mechanical Properties of Pipe (Raw Material)								
*	Heat No.	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100		Type of Specimen	YS Mpa	TS Mpa	EL% (GL:50mm)		Flattening Test	HT Mpa		Hardness Test HRB
1	230103AT04	1.2	38.4	89.1	35	1	1004	1630	204		Longitudinal	257	597	57		PASSED	-		81
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300			MIN 205	MIN 515	MIN 28					

* Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, NACE MR0103:2015. ISO 9001-2015/EN 10204-3.1. PED 2014/68/EU ANNEX I SECTION 4.3 INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD.
HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER. PICKLED AND PASSIVATED.
NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.

We certify that the above material has been inspected and tested and complies with the order/contract. This Material (BW Fittings, HS Code 730723), is produced by S.P. United Industry SDN. BHD.
Material here certified does not contain any steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No COUNCIL REGULATION (EU) 2023/1214 of 23 June 2023 and amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilizing the situation in Ukraine.

OTHERS:	DESCRIPTION :
N/A	N/A

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.

Head of QA/QC Dept.

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☑ Review

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

PTD 204334,JALAN PLATINUM UTAMA,

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZONE 12B, 81700 PASIR GUDANG

JOHOR DARUL TAKZIM, MALAYSIA

Tel: +607-2518888 Fax: +607-2519999 Website: www.pantechssalloy.com

http:// www.pantech-group.com

NSF Certified to NSF/ANSI 61

LRQA CERTIFIED ISO 9001 Approval No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX I, PARA 4.3. PED CERTIFICATE NO. : 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Raccortubi S.p.A

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-38860

Date : 26 May 2022

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
00000103 S	E000004754	ASTM A403/A403M - 20 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 20 / ASME SA 960/SA960M - 21 / ASME SECTION II PART A-2021	Solution Treated, Pickled-Passivated

Heat No.	Product & Size	Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
JO043-1	4" X 2" SCH 10s CON-REDUCER	100	WP316/316L-S	PASSED	19AL138

Specification	Chemical Composition (%)										Tensile Test *1			Hardness	
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS (KSI / MPa)	TS (KSI / MPa)	E (%)	(HRB)	Inter-granular corrosion test
Max															
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-		-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
JO043-1	0.027	0.36	1.09	0.028	0.002	16.35	11.05	2.04	< 0.01		256	605	58	80	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER; AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-12a STANDARD, SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE, LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-10 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

Pantech Stainless & Alloy Industries Sdn. Bhd.
200601013677 (733428-W)
PTD 204334, Jalan Platinum Utama,
Kawasan Perindustrian Pasir Gudang, Zon 12B,
81700 Pasir Gudang, Johor.
Tel: +607-251 8888 Fax: +607-251 9999

QAQC MANAGER HASSANUDDIN

Head of Quality Assurance Department

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Form :FQA-030b R.6; 04-03-2022

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 380 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. CONC. 4"x2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: J0043-1 - Qty:1,00

Protocol: CTCERC202400004695 * CERTIFIED COPY * Issued 20-05-2024

raccortubi

Customer: ROSETTI MARINO S.p.A.

Description: RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS

Heat num. or Pcs. marking: 1163621 - Qty:12,00

Order: 1724000839 - 22.04.24 - Item n.: 390 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O

Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5
29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente RACCORTUBI S.p.A.
Customer/

Ordine N. Master plan Aprile 2021/1
P.O.N./C.N.

Pos. N. 30 **Q.tà** 190
Item/Poste Q.ty/Q.té

(*) Marcatura e cert. N. 1163621
Material Marking e Cert. N.

Created on: 15-03-2021

Descrizione CONC.REDS 1.1/2"x1" SCH.40/S SEAMLESS
Description
Description

Specifica FITTINGS TO ASTM A403/403M-20
Specification ASME SA403/SA403Sect. II Part.A ed.19 WP 316/316L
Spécification DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: TUBACEX Cert. No.: 720001
Raw material - manufacturer/Materiel du depart - fabriquant:
TUBACEX Cert. No.: 720001

Specifica Specification/Specification	Caratteristiche meccaniche Mechanical Properties/Caracteristiques Mechaniques							
	Colata N. Heat N. Coulée N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
SMLS PIPES TO ASME/ASTM SA/A 312TP 316/316L, DIMS TO ANSI B36.19	57370	P2002864	325	596	46	HRC<22	HRC 7	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Coulée N.	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	Co	N		PRE	FERRITE
57370	0,021	0,310	1,51	0,026	0,0010	16,85	11,55	2,14	0,26	0,003	0,065	0,066			

Prove
Tests/Tests

Prova di corrosione A262 Prat. E: Conforme
Corrosion Test A262 Pract. E: In conformity
Essais de corrosion A262 Prat. E: En Conformité

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità

Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/UE annex I para 4.3

Materials comply with MESC 76/110 & 76/202.

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication

Formato a freddo	**Senza saldatura**
Cold formed	Seamless
Formés à froid	Sans soudure

Ispezione
Inspection/inspéction

Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1045°C

Solution Annealing at 1045°C , water quenching

Hypertrempés à 1045°C

Guaranteed caracteristics (A.M. du 24.03.78)
Caracteristiques garanties pour Z2CN18-10 et Z2CND17-13

C <= 0.25%	Rm <= 760 N/mm2
S <= 0.05%	Rm(A-2) <= 10500 N/mm2
P <= 0.05%	A% sur 5,65 sqrt(So) >= 16

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☑ Review

1/1

raccortubi
Heat num. or Pcs. marking: MR211002 - Qty:1.00
Customer:
Description: RID. CONC. 2"x1.1/4" SCH.10/S SEAMLESS
ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 410 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

INSPECTION CERTIFICATE

Cert. to RACCORTUBI S.P.A

Order No. : 22TEC001
(注文番号)

P.O. No. : 00000065 S

S.P. UNITED INDUSTRY SDN. BHD.

(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Date : SEPTEMBER 29, 2022
(日付)

Certificate No. : 22-09-1078
(書類番号)

LRQA CERTIFIED ISO 9001
Approval No:ISO9001-004H008
PED Cert No:0345/PED/MUM/101009/1

Product (形状)	Product Specification (規格)	Specification for Pipe (Raw Material) (材料規格)
STAINLESS STEEL CONCENTRIC REDUCER (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 / ASME B16.9-2018 MSS SP-43-2019 / ASME BPVC II PART A-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*	Size (寸法)	Dimension in mm (寸法)		Heat No. (溶解番号)	Quantity (数量)	Surface Inspection (外観検査)	Dimension Inspection (寸法検査)	S. P. I. Code No.	Manufacturing Method
		Outside Dia (外径)	Thickness (厚さ)						
1	2"x1¼"x10S	60.33x42.16	2.77x2.77	MR211002	25	GOOD	GOOD	34312012	COLD FORMED

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

Chemical Composition of Pipe (Raw Material) % (化学成分) (材料)

*	Raw Pipe Heat No.	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100	
1	D210725	1.5	32	94	29	0.9	1005	1657	203	
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300	

Mechanical Properties of Pipe (Raw Material) (機械的性質)

*	Type of Specimen (試験片)	YS Mpa (耐力)	TS Mpa (引張強さ)	EL% (伸び) (GL:50mm)	EL% (伸び) Standard (規格値)	Flattening Test (へん平試験)	HT Mpa (水圧試験)	Hardness Test HRB	
1		230	530	55		GOOD	GOOD	78	
Specification		MIN 205	MIN 515	MIN 28					

Remarks * Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, MR0103:2015
INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD. ISO 9001 / EN 10204-3.1 PED 2014/68/EU ANNEX I SECTION 4.3
HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER WITHIN 1 MINUTES TO BELOW 40°C.
MATERIAL WAS MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH INDICATED SPECIFICATIONS AND WAS FOUND TO MEET THE REQUIREMENTS. NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR.
MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.
(上記の製品は,当該規格及び,で注文の要求事項に適合するてとを証明します.)

Head of QA/QC Dept.
質量/品質管理課長

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

PTD 204334,JALAN PLATINUM UTAMA,

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZONE 12B, 81700 PASIR GUDANG

JOHOR DARUL TAKZIM, MALAYSIA

Tel: +607-2518888 Fax: +607-2519999 Website: www.pantechssalloy.com

http:// www.pantech-group.com

Certified to NSF/ANSI 61

LRQA CERTIFIED ISO 9001

Approval No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO. : 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Raccortubi S.p.A

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-47152

Date : 2 Oct 2023

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
00000165 S	E000005894	ASTM A403/A403M - 22 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 23 / ASME SA 960/SA960M - 21 / ASME SECTION II PART A-2021	Solution Treated, Pickled-Passivated

Heat No.	Product & Size			Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
LN011-1	6" X 4"	SCH 10s	ECC-REDUCER	15	WP316/316L-S	PASSED	NY220903AV08
HTA077-04-103ER	6" X 4"	SCH 10s	ECC-REDUCER	21	WP316/316L-S	PASSED	D180405
ITA082-06-103ER	6" X 4"	SCH 10s	ECC-REDUCER	1	WP316/316L-S	PASSED	D181020
ITA087-02-103ER	6" X 4"	SCH 10s	ECC-REDUCER	3	WP316/316L-S	PASSED	D190210

Specification	Chemical Composition (%)										Tensile Test *1			Hardness	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS	TS	E		
Max											(KSI / MPa)		(%)	(HRB)	
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-		-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
LN011-1	0.015	0.34	0.88	0.033	0.001	16.52	10.01	2.09	< 0.01		240	545	60	65	PASSED
HTA077-04-103ER	0.022	0.32	0.91	0.038	0.002	16.95	11.09	2.06	< 0.01		235	550	51	67	PASSED
ITA082-06-103ER	0.021	0.41	0.85	0.037	0.003	16.76	11.12	2.08	< 0.01		225	540	62	75	PASSED
ITA087-02-103ER	0.021	0.35	1.10	0.033	0.005	16.75	11.12	2.15	< 0.01		230	530	53	75	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER; AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-22 STANDARD, SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-15 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156-2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT

Pantech Stainless & Alloy Industries Sdn. Bhd.
200601013677 (733428-W)
PTD 204334, Jalan Platinum Utama,
Kawasan Perindustrian Pasir Gudang, Zon 12B,
81700 Pasir Gudang, Johor.
Tel: +607-251 8888 Fax: +607-251 9999

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. QAQC MANAGER HASSANUDDIN

Head of Quality Assurance Department

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Form :FQA-030b R.6; 04-03-2022

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 430 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. ECC. 6"x4" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: HTA077-04-103ER - Qty:1,00

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

raccortubi
Customer: ROSETTI MARINO S.p.A.
Description: RID. ECC. 4"x2" SCH.10/S SEAMLESS
Heat num. or Pcs. marking: YX1906-526 - Qty:1,00
Order: 1724000839 - 22.04.24 - Item n.: 440 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024
CTCERT202300004353.1.0001

良豐不銹鋼管件有限公司
LIANG FENG STAINLESS STEEL FITTING CO., LTD.
高雄市路竹區中山南路74號
NO. 74, Zhongshan S. Rd., Luzhu District, Kaohsiung City 821, Taiwan R.O.C.
TEL: 886-7-6970588 FAX: 886-7-6970599

ISO-9001 LRQA
Certificate No.: 10303342
PED 2014/68/EU
Approval Certificate No.:00014950

JIS B2313
Certificate No.: JWTW 13002
JIS B2309
Certificate No.: JWTW 13001

EN10204-3.1

頁次 PAGE: 1
日期 DATE: 2023/8/17
證書號碼 CERTIFI. NO.: 23080827

本證書請妥善保存遺失恕不補發
Please keep this certificate properly.
If it is lost, it will not be reissued.

客戶 PURCHASER: Raccortubi S.p.A.
規範 PRODUCT SPEC.: ASTM A403/403M-22 ASME SA403-21
原料 RAW MATERIAL: ASTM A312-2019/ASME SA312-2021
檢驗規範 INSP. SPEC.: ASME B16.9-18

檢驗證明書
INSPECTION CERTIFICATE

ITEM NO. 項次	PRODUCT & SIZE 產品品名&尺寸	QUANTITY PCS 數量	MATERIAL HEAT NO. 爐號	MANUFACTURING NO. 製造工令	CUSTOMER'S ORDER NO. 客戶訂單號碼	P. I. N.O. 銷貨編號	REMARKS 備註
56	ER 4" X 2" SCH10S WP316/316L-S	25	YX1906-526	23040006	00000083 S	23080513	cold formed,seamless execution

ITEM NO. 項次	SPECIFICATION 說明		CHEMICAL COMPOSITION % 化學成份										PHYSICAL 物理性質			
			C 碳	Si 矽	Mn 錳	P 磷	S 硫	Cu 銅	Ni 鎳	Cr 鉻	Mo 鉬	V 釩	Nb 鈮	YS 降伏點 Mpa	TS 抗拉強度 Mpa	E 延伸率 %	HARD,HRB 硬度
	STANDARD	MIN.							10.000	16.000	2.000			170	485	28	
		MAX.	0.030	1.000	2.000	0.045	0.030		14.000	18.000	3.000			0	0	0	
56			0.022	0.410	1.120	0.033	0.002		10.050	16.230	2.040			275	558	54	85.91

HEAT TREATMENT 熱處理 1060°C ±10° W.Q.	DIMENTIONAL INSPECTION 尺寸檢查	VISUAL INSPECTION 外觀檢查	NONDESTRUCTIVE EXAMINATION (PT. UT. RT.) 非破壞檢測
Solution Annealing, Good	GOOD	GOOD	

WE HEREBY CERTIFIED THAT THE ABOVE MATERIAL HAD BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND WAS FOUND TO MEET THE REQUIREMENTS OF ABOVE SPECIFICATIONS AND PURCHASER'S ORDER.
茲證明上述材料按照規範進行製造，取樣，檢測和檢驗，符合上述規範和採購訂單的要求。

備註：
1. 100% P.M.I.: Satisfactory. 2. Material conforms to NACE MR0175/ISO 15156(2021) & MR0103(2015). 3. Corrosion test acc. ASTM A262 Practice E: Satisfactory. 4. Fittings in pickled and passivated condition. 5. Heat Treatment soaking time 25~28min, and rapidly cold with water.
6. No Russian materials were used during the whole production cycle.

良豐不銹鋼管件有限公司 品檢專用章 Quality Inspection Stamp Liang Feng Stainless Steel Fitting Co., Ltd.

歐劭軒
MANAGER OF Q. A. DEPT. 品管課經理

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

raccortubi Heat num. or Pos. marking: MR230757 - Qty:5,00
Customer:
Description: RID. ECC. 4"x2" SCH.10/S SEAMLESS
ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 440 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024
CTCERT20240001915.1.0001

INSPECTION CERTIFICATE

EN 10204 : 3.1

Certification No. : MCP2401-00015-17

Cert. to RACCORTUBI S.P.A

Order No. : 23TEC002
(注文番号) 00000126 S dtd 11-05-2023

S.P. UNITED INDUSTRY SDN. BHD.

(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Invoice No : SP/FIT24-002

Date (日付) : 04/01/2024

LRQA CERTIFIED ISO 9001

Product	Specification	Specification for Pipe (Raw Material)
STAINLESS STEEL ECCENTRIC REDUCER (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 / ASME B16.9-2018 / MSS SP-43-2019 / ASME BPVC II PART A-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*	Size	Dimension in mm		Lot No.	Quantity	Surface Inspection	Dimension Inspection	Manufacturing Method	Item Reference No.
		Outside Dia	Thickness						
1	4" x 2" X 10S	114.30 X 60.33	3.05 X 2.77	MR230757	25	PASSED	PASSED	COLD FORMED	N/A

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

	Chemical Composition of Pipe (Raw Material) %										Mechanical Properties of Pipe (Raw Material)								
*	Heat No.	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100		Type of Specimen	YS Mpa	TS Mpa	EL% (GL:50mm)		Flattening Test	HT Mpa		Hardness Test HRB
1	221230AS17	1.8	38.8	88.5	35	2	1006	1624	203		Longitudinal	253	593	53		PASSED	-		82
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300			MIN 205	MIN 515	MIN 28					

* Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, NACE MR0103:2015. ISO 9001-2015/EN 10204-3.1. PED 2014/68/EU ANNEX I SECTION 4.3 INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD. HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER. PICKLED AND PASSIVATED.
NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.

We certify that the above material has been inspected and tested and complies with the order/contract. This Material (BW Fittings, HS Code 730723), is produced by S.P. United Industry SDN. BHD.
Material here certified does not contain any steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No COUNCIL REGULATION (EU) 2023/1214 of 23 June 2023 and amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilizing the situation in Ukraine.

OTHERS:	DESCRIPTION :
N/A	N/A

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.

Head of QA/QC Dept.

raccortubi Heat num. or Pos. marking: 1157SA019 - Qty:4,00

Description: TEE UG. 1.1/2" SCH.40/S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 450 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5 - 29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente Customer/ RACCORTUBI S.p.A.

Ordine N. P.O.N./C.N. OF005236 del 19/02/19

Pos. N. Item/Poste 23 **Q.tà** Q.ty/Q.té 58

(*) Marcatura e cert. N. Material Marking e Cert. N. 1157SA019

Created on: 30-08-2019

Descrizione Description Description EQ. TEES 1.1/2" SCH.40/S

Specifica Specification Spécification BW FITTINGS TO ASTM A/815M-14e1
ASME SA/815M ed.17 UNS S32760
DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: TUBACEX Cert. No.: 648100
Raw material - manufacturer/Materiel du depart - fabriquant: SMLS PIPES TO ASTM A-790 UNS S32760
TUBACEX Cert. No.: 648100

Test produzione
Production test/Coupon de production

Caratteristiche meccaniche
Mechanical Properties/Caracteristiques Mechaniques

Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS	**Colata N.** Heat N. Couléè N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement 2"	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
QTR: 01/SDSS/A Rev.4 Specimens location drawing as per relevant QTR	49329	495/19	642	881	35.3	HRC<28	HRC 24	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Couléè N.	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**Mo**	**Cu**	**W**	**N**			**PRE**	**FERRITE**
49329	0,014	0,460	0,69	0,020	0,0004	25,55	6,95	3,62	0,66	0,62	0,268			41.784	47.3

Prove
Tests/Tests

Altri Others Autres G-48 MET.A

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità

Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/UE annex I para 4.3
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTORY
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262 Pr E
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.:19752/19
- MATERIAL AND TESTS ACCORDING TO M-630 REV.6 - MDS D53 REV.5
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT WITH RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication

Formato a freddo Cold formed Formés à froid — **Senza saldatura** Seamless Sans soudure

Ispezione
Inspection/Inspéction

Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique

Solubilizzazione a 1130°C

Solution Annealing at 1130°C , water quenching

Hypertrempés à 1130°C

Heat treatment soaking time for 30 minutes, batch n.0313

Guaranteed caracteristics (A.M. du 24.03.78)
Caracteristiques garanties pour Z2CN18-10 et Z2CND17-13

C <= 0.25% Rm <= 760 N/mm2
S <= 0.05% Rm(A-2) <= 10500 N/mm2
P <= 0.05% A% sur 5,65 sqrt(So) >= 16

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica Trade Mark

Ispettore
Inspector/Inspecteur

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☒ Review

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:4,00

Customer: ROSETTI MARINO S.p.A.

Description: TEE UG. 1.1/2" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 450 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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RAPPORTO DI PROVA/TEST REPORT

G48ACE 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		**495/19**	**49329**	**ASTM A 815-18 UNS S32760**

Prova di "pitting" in ferro-cloruro/ Ferric chloride pitting test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Lunghezza/ Length mm	Larghezza/ Width mm	Spessore/ Thickness mm	Area/ Area cm²	
105408	ASTM G 48-11(2015) - Met. A	RTX_DS3 Rev.7	B L FT	Meccanica/ Mechanical	50,77	25,49	5,09	33,65	[(LxWx2)+(WxTx2)+(LxTx2)] / 100

Temperatura di prova (°C)/ Test temperature (°C) 50

Tempo di esposizione (ore)/ Exposure time (hours) 24

Data e ora inizio/ Initial date and time	Data e ora fine/ End date and time
03/09/2019 09:00:00	04/09/2019 09:00:00

Soluzione/ Solution FeCl3 · 6H2O 10% WATER SOLUTION

Peso iniziale/ Initial weight (g)	48,0673	
Peso finale (g)/ Final weight (g)	48,0670	
Perdita di peso (g)/ Weigth loss (g)	0,0003	
Perdita di massa/ Specimen mass loss	0,0892	g/m²
Limite perdita di massa max/ Limit Specimen mass loss max	**4,0**	**g/m²**

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X / NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata/ Examined area cm² 25,88 (LxWx2)/100

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Ingresso Materiale/ Date of Material Arrival **02/09/2019**

Data Rapporto di prova/ Test Report Date **04/09/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness: [L]-long.

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:4,00
Customer: ROSETTI MARINO S.p.A.
Description: TEE UG. 1.1/2" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 450 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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RAPPORTO DI PROVA/TEST REPORT

E562 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		495/19	49329	**ASTM A 815-18 UNS S32760**

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti/ Determining volume fraction by systematic manual point count

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Ingrandimento/ Enlargement	Misura del reticolo/ Grid size	Data esecuzione/ Date of Testing
105404	ASTM E 562-11	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	20% NaOH	500 X	40 mm x 40 mm 5 x 5 = 25 Points	04/09/2019

	Valore Min/ Value Min	Valore Max/ Value Max
Ferrite Vv (% Frazione di volume)/ Vv(% Volume Fraction) 47.3	**40**	**55**

s 3,7 95% C.I. 1,4 %RA 2,95

Ferrite % Frazione di volume per ciascun campo esaminato/ % Volume Fraction for each metallographic section

1	**48**	2	**52**	3	**42**	4	**48**	5	**50**
6	**50**	7	**44**	8	**46**	9	**48**	10	**44**
11	**44**	12	**44**	13	**52**	14	**54**	15	**48**
16	**46**	17	**42**	18	**52**	19	**44**	20	**46**
21	**46**	22	**42**	23	**54**	24	**46**	25	**52**
26	**52**	27	**44**	28	**44**	29	**50**	30	**44**

Nr. di campi per provino/sezione/spaziatura/angolo/ Nr. of fields for specimens/section/angle 30 / 11 x 20 mm / 1 x 3.0 mm / 45°

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
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Data Ingresso Materiale/ Date of Material Arrival **02/09/2019**

Data Rapporto di prova/ Test Report Date **04/09/2019**

Firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness: [T]-trasv.

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:4,00

Customer: ROSETTI MARINO S.p.A.

Description: TEE UG. 1.1/2" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 450 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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RAPPORTO DI PROVA/TEST REPORT

ANL 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		**495/19**	**49329**	**ASTM A 815-18 UNS S32760**

ANALISI SPETTROMETRICA AD EMISSIONE ATOMICA SOTTOVUOTO/ Atomic emission vacuum Spectrometric analysis

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Temperatura di prova (°C)/ Test temperature (°C)	ID Gruppo / Group ID	Data esecuzione/ Date of Testing
105411	PO 04-145 RC R08. 2018	RTX_D53 Rev.7 + STATOIL -2010080 Rev.0	B UP	20	7995	04/09/19

			%	Min.	Max.				%	Min.	Max.				%	Min.	Max.
C	**0,016**	**± 0,003**	97.5		0,030	**Nb**						**Fe**					
Si	**0,50**	**± 0,02**	97.5		1,00	**Ti**						**Ca**					
Mn	**0,72**	**± 0,02**	97.5		1,00	**W**	**0,63**	**± 0,02**	95.0	0,50	1,00	**Ta**					
P	**0,021**	**± 0,003**	97.5		0,030	**Pb**						**Sb**					
S	**0,005**	**± 0,005**	97.5		0,010	**Sn**						**H**					
Cr	**25,6**	**± 0,3**	95.0	24,0	26.0	**As**						**Cd**					
V						**B**						**Se**					
Mo	**3,6**	**± 0,1**	95.0	3,0	4,0	**N**	**0,28**	**± 0,02**	95,0	0,20	0,30	**Bi**					
Ni	**7,0**	**± 0,1**	95.0	6.0	8,0	**La**						**Hg**					
Cu	**0,67**	**± 0,03**	95.0	0,50	1,00	**Mg**											
Ce						**Zr**											
Al						**Zn**											
Co						**O**											

FORMULAS			%	Min.	Max.
PREN	**42,0**	**± 0,3**	97,5	40,0	

Decision rule:
the result is "Compliant to Specification" when:
- *Result ≥ Lower Limit (confidence interval CI=50÷97,5 %)*
- *Result ≤ Upper Limit (confidence interval CI=50÷97,5 %)*
- *Lower Limit ≤ Result ≤ Upper Limit (confidence interval CI=47,5÷95%)*

When the result falls within the uncertainty range at the limit value, the result can be Probably Compliant or Probably Not Compliant

Expanded uncertainty below reported is based on standard uncertainty multiplied by a coverage factor k = 2 that corresponds to a coverage probability of about 95% for a normal distribution. The evaluation is based on EA 4/16 Ed. 2003

Note/ Remarks

Esito/ Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

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Data Ingresso Materiale/ Date of Material Arrival **02/09/2019**

Data Rapporto di prova/ Test Report Date **04/09/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Test Position Legend: ; [B]-Specimen in Base Material; [UP]-external sup.

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:4.00

Customer: ROSETTI MARINO S.p.A.

Description: TEE UG. 1.1/2" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 450 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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RAPPORTO DI PROVA/TEST REPORT

DUR 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

Campione fornito da cliente/Sample supplied by the Customer :

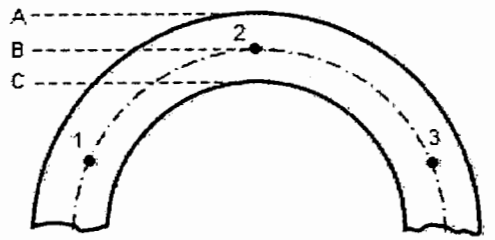
Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		495/19	49329	**ASTM A 815-18 UNS S32760**

PROVA DI DUREZZA HBW (Strumento di misura dell'impronta di Tipo A)/ HBW hardness test (Indentation measuring device Type A)

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position		Durezza/ Hardness	Data esecuzione/ Date of Testing
105403	ASTM E 10-18 except par. 5.7 Portable Hardness Testing Machines	RTX_053 Rev.7	B	T	HBW 2,5/187.5	03/09/2019

(B1) - Base Material **MAX 270**

1 249 2 242 3 247



Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

Position	Average	StdDev
(B1) - Base Material	246	3.6

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Data Ingresso Materiale/ Date of Material Arrival **02/09/2019**

Data Rapporto di prova/ Test Report Date **04/09/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☒ Review

Test Position Legend: [B]-Specimen in Base Material: [SZ]-along the thickness; [T]-trasv.

raccortubi Heat num. or Pos. marking: 1157SA019 - Qty:4.00
Customer: ROSETTI MARINO S.p.A.
Description: TEE UG. 1.1/2" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 450 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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RAPPORTO DI PROVA/TEST REPORT

MIC 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

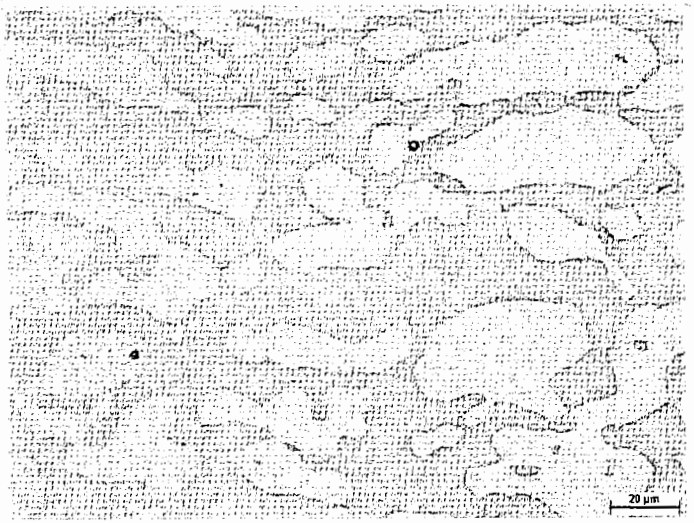
Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		**495/19**	**49329**	**ASTM A 815-18 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
105405	ASTM E 3-11(2017)+ASTM E 407-07(2015)e1	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	02/09/2019

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	10% Oxalic	Materiale base / Base Material 5.0 x 20.0 = 100.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da nitruri. / Structure free from nitrides.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
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		Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
Data Ingresso Materiale/ Date of Material Arrival	**02/09/2019**				
Data Rapporto di prova/ Test Report Date	**04/09/2019**	*Antonielli Stefano*	*Amani Paolo*		

firmato elettronicamente/electronically signed

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi Heat num. or Pos. marking: 1157SA019 - Qty:4.00
Customer: ROSETTI MARINO S.p.A.
Description: TEE UG. 1.1/2" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 450 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

SIDER TEST Srl
Mechanical and Chemical Laboratory Non Destructive Tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it
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RAPPORTO DI PROVA/TEST REPORT

MIC 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

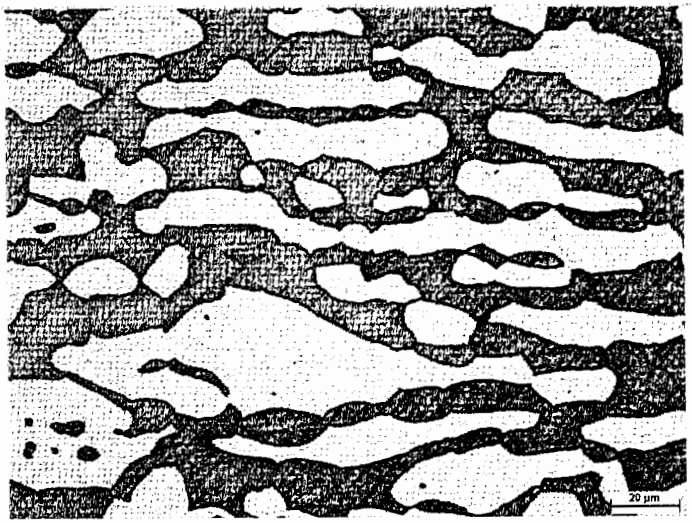
Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		495/19	49329	**ASTM A 815-18 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
105406	ASTM E 3-11(2017)+ASTM E 407-07(2015)e1	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	02/09/2019

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	20% NaOH	Materiale base / Base Material 5.0 x 20.0 = 100.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Ingresso Materiale/ Date of Material Arrival **02/09/2019**

Data Rapporto di prova/ Test Report Date **04/09/2019**
firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy
Antonielli Stefano

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
Amani Paolo

Ispettori/Inspector

Cliente/Customer
ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:4.00
Customer: ROSETTI MARINO S.p.A.
Description: TEE UG. 1.1/2" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 450 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
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RAPPORTO DI PROVA/TEST REPORT

A923A 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

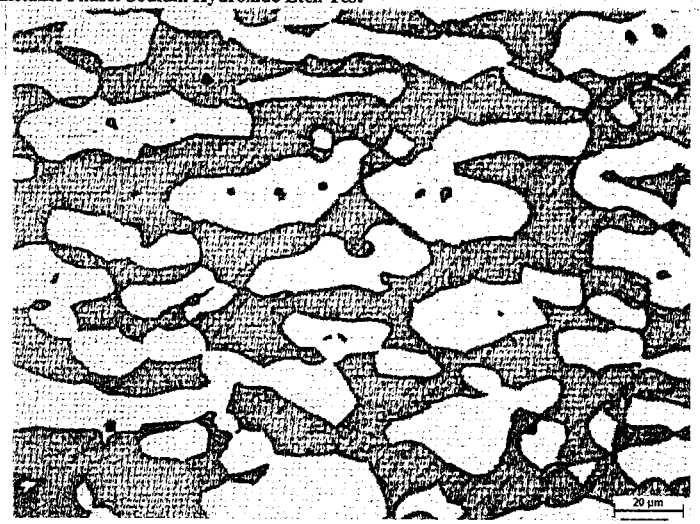
Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		**495/19**	**49329**	**ASTM A 815-18 UNS S32760**

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio/ Detecting Detrimental Intermetallic Phase: Sodium Hydroxide Etch Test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
105410	ASTM A 923-14 (Met. A)	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	02/09/2019

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	40g NaOH to 100g distilled water	Materiale base / Base Material



Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure.

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
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Data Ingresso Materiale/ Date of Material Arrival	**02/09/2019**	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
Data Rapporto di prova/ Test Report Date	**04/09/2019** firmato elettronicamente/electronically signed	*Antonielli Stefano*	*Amani Paolo*		

Test Position Legend: [B]-Specimen In Base Material: [FT]-full thickness: [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 115?SA019 - Qty:4,00
Description: TEE UG. 1.1/2" SCH.40/S SEAMLESS
Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 450 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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RAPPORTO DI PROVA/TEST REPORT

A923C 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		**495/19**	**49329**	**ASTM A 815-18 UNS S32760**

Individuazione di fasi intermetalliche dannose: Prova di corrosione per "pitting" in cloruro ferrico/ Detecting Detrimental Intermetallic Phase: Ferric Chloride Pitting Corrosion Test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Lunghezza/ Length mm	Larghezza/ Width mm	Spessore/ Thickness mm	Area/ Area cm²
105409	ASTM A 923-14 (Met. C)	RTX_D53 Rev.7	B L FT	Meccanica/ Mechanical	23,06	48,96	5	29,78

Temperatura di prova (°C)/ Test temperature (°C) 50

Temperatura Minima Rilevata (°C)/ Minimum specimen preparation (°C) 49,7

Temperatura Massima Rilevata (°C)/ Maximum specimen preparation (°C) 50,2

Peso Iniziale/ Initial weight (g) 44,3776

Peso finale (g)/ Final weight (g) 44,3766

Perdita di peso (g)/ Weigth loss (g) 0,0010

Tempo di esposizione (ore)/ Exposure time (hours) 24

Data inizio/ Initial date	Data fine/ End date
03/09/2019 09:00:00	04/09/2019 09:00:00

Soluzione/ Solution FeCl3 · 6H2O 10% water solution

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X /
NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Velocità di corrosione/ Corrosion speed (mg/(dm²*d)) **3,4**

Limite velocità di corrosione (mg/(dm²*d)) max./ Corrosion rate limit (mg/(dm²*d)) max. **10,0**

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Ingresso Materiale/ Date of Material Arrival **02/09/2019**

Data Rapporto di prova/ Test Report Date **04/09/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy
Antonielli Stefano

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
Amani Paolo

Ispettori/Inspector

Cliente/Customer
ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

raccortubi Heat num. or Pos. marking: 1157SA019 - Qty:4,00

Description: TEE UG. 1.1/2" SCH.40/S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 450 - Project: 123A80A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020 10

Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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RAPPORTO DI PROVA/TEST REPORT

PM 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		495/19	49329	**ASTM A 815-18 UNS S32760**

PROVA DI TRAZIONE A TEMPERATURA AMBIENTE/ Tensile test at room temperature

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Dimensioni/ Dimension Wth mm	Ø / Width mm	ØPipe mm	Lo/ Lo	Posizione di prelievo/ Test position	Temp./ Temp. °C	Snervamento/ Yield strength Mpa		Rottura/ Tensile strength Rm Mpa		Allungamento/ Elongation A (%)		Strizione/ Area Reduction Z (%)	S/R/ Ratio Yield strength / Tensile strength	Data esecuzione/ Date of Testing
105401	ASTM A 370-18 (Tension Test)	RTX_D53 Rev.7	5,21	12,50		50,00	B L FT	23	(≥550)	Rp0.2% **642**		(750÷895)	**881**	(≥25)	**35,3**			03/09/2019

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

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Data Ingresso Materiale/ Date of Material Arrival **02/09/2019**

Data Rapporto di prova/ Test Report Date **04/09/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness: [L]-long.

raccortubi
Customer: ROSETTI MARINO S.p.A.
Description: TEE UG. 2" SCH.10/S SEAMLESS
Heat num. or Pcs. marking: MT220055 - Qty:3.00
Order: 1724000839 - 22.04.24 - Item n.: 460 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020 10
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024
CTCERT202200005353.1

INSPECTION CERTIFICATE

Page (頁) : 3

Cert. to RACCORTUBI S.P.A

S.P. UNITED INDUSTRY SDN. BHD.

(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Order No. : 22TEC001 (注文番号)

Date (日付) : SEPTEMBER 29, 2022

Certificate No. : 22-09-0585 (審類番号)

P.O. No. : 00000065S

LRQA CERTIFIED ISO 9001
Approval No:ISO9001-0068006
PED Cert.No:0343/PED/MUM/1D1009/2

Product (形状)	Product Specification (規格)	Specification for Pipe (Raw Material) (材料規格)
STAINLESS STEEL STRAIGHT TEE (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 / ASME B16.9-2018 MSS SP-43-2019 / ASME BPVC II PART A-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*	Size (寸法)	Dimension in mm (寸法) Outside Dia (外径)	Thickness (厚さ)	Heat No. (溶解番号)	Quantity (数量)	Surface Inspection (外観検査)	Dimension Inspection (寸法検査)	S. P. I. Code No.	Manufacturing Method
1	2"x10S	60.33	2.77	MT220055	200	GOOD	GOOD	54312000	COLD FORMED

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

Chemical Composition of Pipe (Raw Material) % (化学成分) (材料)

*	Raw Pipe Heat No.	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100	
1	D211120	1.3	33.4	104	26	0.9	1004	1630	202	
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300	

Mechanical Properties of Pipe (Raw Material) (機械的性質)

Type of Specimen (試験片)	YS Mpa (耐力)	TS Mpa (引張強さ)	EL% (伸び) (GL:50mm)	EL% (伸び) Standard (規格値)	Flattening Test (へん平試験)	HT Mpa (水圧試験)	Hardness Test HRB	
	235	535	55		GOOD	GOOD	75	
	MIN 205	MIN 515	MIN 28					

Remarks * Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, MR0103:2015
INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD. ISO 9001 / EN 10204-3.1 PED 2014/68/EU ANNEX I SECTION 4.3
HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER WITHIN 1 MINUTES TO BELOW 40°C.
MATERIAL WAS MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH INDICATED SPECIFICATIONS AND WAS FOUND TO MEET THE REQUIREMENTS. NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR.
MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.
(上記の製品は、当該規格及び、で注文の要求事項に適合するてとを証明します。)

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Head of QA/QC Dept.
質量/品質管理課長

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

PTD 204334,JALAN PLATINUM UTAMA,

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZONE 12B, 81700 PASIR GUDANG

JOHOR DARUL TAKZIM, MALAYSIA

Tel: +607-2518888 Fax: +607-2519999 Website: www.pantechssalloy.com

http:// www.pantech-group.com

Certified to NSF/ANSI 61

LRQA CERTIFIED ISO 9001 Approval No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO.: 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Raccortubi S.p.A

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-47104

Date : 2 Oct 2023

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
00005390	E000005892	ASTM A403/A403M - 22 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 23 / ASME SA 960/SA960M - 21 / ASME SECTION II PART A-2021	Solution Treated, Pickled-Passivated

Heat No.	Product & Size	Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
LN008-1	4" SCH 10s TEE	100	WP316/316L-S	PASSED	NY220918AT17

Specification	Chemical Composition (%)										Tensile Test *1			Hardness	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS (KSI / MPa)	TS (KSI / MPa)	E (%)	(HRB)	
Max															
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-		-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
LN008-1	0.012	0.45	1.02	0.030	0.001	16.23	10.17	2.08	< 0.01		242	578	58	66	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER; AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-22 STANDARD, SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : ADD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-15 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

HEAT TREATMENT. SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT

Pantech Stainless & Alloy Industries Sdn. Bhd.
200601013677 (733428-W)
PTD 204334, Jalan Platinum Utama,
Kawasan Perindustrian Pasir Gudang, Zon 12B,
81700 Pasir Gudang, Johor.
Tel: +607-251 8888 Fax: +607-251 9999

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. QAQC MANAGER HASSANUDDIN

Head of Quality Assurance Department

ROSETTI MARINO
Supply Management Dept
Witness Revie

Form :FQA-030b R.6: 04-03-2022

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 470 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: TEE UG. 4" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: LN008-1 - Qty:6,00

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

raccortubi Heat num. or Pcs. marking: 66A-SWJ011 - Qty:30.00
Customer: ROSETTI MARINO S.p.A.
Description: TEE UG. 1" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 480 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000210
Protocol: CTCERC20240000469S * CERTIFIED TRUE COPY * Issued 20-05-2024
CTCERT20230000188O.1

MATERIAL INSPECTION CERTIFICATE

To EN10204 3.1/ISO 10474 3.1B

THAI BENKAN CO.,LTD.
58 Moo 13 Sol Suksawat 70, Bangkru Phrapadaeng, Samutprakarn 10130. THAILAND
Telephone : 66 (0) 2463 0074. 66 (0) 463 6235-7

Purchaser Name : RACCORTUBI S.p.A.

TBC PO No. : WS-390 **Customer PO No. :** 00000261 S

Benkan No. : **JOB No. :**

D/M/Y 16/01/2023 **Certificate No. : T202318000110 Rev. No. : 0**

| | | |

Customer: ROSETTI MARINO S.p.A.

Description: TEE UG. 1.1/2" SCH.40/S SEAMLESS

Heat num. or Pcs. marking: 66HSWJ128 - Qty:10,00

Order: 1724000839 - 22.04.24 - Item n.: 490 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010

Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

CTCERT20240000632.1.0001

MATERIAL INSPECTION CERTIFICATE

To EN10204 3.1/ISO 10474 3.1B

THAI BENKAN CO.,LTD.
58 Moo 13 Soi Suksawat 70, Bangkru Phrapadaeng, Samutprakarn 10130. THAILAND
Telephone : 66 (0) 2463 0074. 66 (0) 463 6235-7

Purchaser Name : RACCORTUBI S.p.A.

TBC PO No. : WS-490 **Customer PO No. :** 00000084 S

Benkan No. : **JOB No. :**

D/M/Y 26/10/2023 **Certificate No. :** T202318004128 **Rev. No. :** 0

| | | |

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

PTD 204334,JALAN PLATINUM UTAMA,

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZONE 12B, 81700 PASIR GUDANG

JOHOR DARUL TAKZIM, MALAYSIA

Tel: +607-2518888 Fax: +607-2519999 Website: www.pantechssalloy.com

http:// www.pantech-group.com

Certified to NSF/ANSI 61

LRQA CERTIFIED ISO 9001 Approval No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO. : 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Raccortubi S.p.A

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-42478

Date : 10 Jan 2023

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
00000296 S	E000005360	ASTM A403/A403M - 20 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 20 / ASME SA 960/SA960M - 21 / ASME SECTION II PART A-2021	Solution Treated, Pickled-Passivated

Heat No.	Product & Size	Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
INA004-03-103T	10" SCH 10s TEE	7	WP316/316L-S	PASSED	11W558
JNA006-01-103T	10" SCH 10s TEE	8	WP316/316L-S	PASSED	HD1908-046

Specification	Chemical Composition (%)									Tensile Test *1			Hardness	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb	YS (KSI / MPa)	TS (KSI / MPa)	E (%)	(HRB)	
Max														
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-	-	-	-	90	
Heat No.														
INA004-03-103T	0.015	0.37	1.16	0.038	0.003	16.40	11.33	2.15	< 0.01	227	530	67	71	PASSED
JNA006-01-103T	0.018	0.36	0.80	0.023	0.001	16.91	11.01	2.06	< 0.01	236	550	58	74	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER; AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-12a STANDARD, SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE, LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-10 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

Pantech Stainless & Alloy Industries Sdn. Bhd.
200601013677 (733428-W)
PTD 204334, Jalan Platinum Utama,
Kawasan Perindustrian Pasir Gudang, Zon 12B,
81700 Pasir Gudang, Johor.
Tel: +607-251 8888 Fax: +607-251 9999

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. QAQC MANAGER HASSANUDDIN

Head of Quality Assurance Department

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Form :FQA-030b R.6; 04-03-2022

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 500 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: TEE UG. 10" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: INA004-03-103T - Qty:2,00

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

raccortubi Heat num. or Pcs. marking: 1181SA05 - Qty:5,00

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 510 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000201O

Protocol: CTCERC2024000469S * CERTIFIED TRUE COPY
* Issued 20-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5 - 29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Quality System

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente RACCORTUBI S.p.A.
Customer/Client

Ordine N. Master plan Dicembre 2015/1
P.O.N./Commande N.

Pos. N. 28 **Q.tà** 44
Item/Poste Q.ty/Q.té

(*) Marcatura e cert. N. 1181SA05 **Data:** 02-12-2015
Material Marking e Cert. N. Date:

Descrizione RED.TEES 1.1/2"x3/4" SCH.40/S
Description
Description

Specifica BW FITTINGS TO ASTM A/815M-14
Specification ASME SA/815M ed.13 UNS S32760
Spécification DIMS/ENDS B16.9-2012

Materiale base - Fabbricante: TUBACEX Cert. No.: 574619
Raw material - manufacturer/Materiel du depart - fabriquant: SMLS PIPES TO ASTM A-790 UNS S32760
TUBACEX Cert. No.: 574619

Test produzione / Production test/Coupon de production	Colata N. / Heat N. / Couléè N.	N. prova / Specimen N. / Echantil. N.	Snervamento / Yield strength / Limite d'elasticité N/mm2	Rottura / Tensile / Resistance à la traction N/mm2	Allungam. % / Elongation / Allongement 2"	Durezza / Hardness as per NACE MRO1-75	Durezza / Hardnes / Dureté	Resilienza / Impact energy / Resilience Joules
Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS								
QTR: 01/SDSS/A Rev.4 Specimens location drawing as per relevant QTR	45687	1052/15	634	881	30.9	HRC<28	HRC 22	

Caratteristiche meccaniche
Mechanical Properties/Caracteristiques Mechaniques

Analisi chimica %
Chemical composition/Composition chimique

Colata N. / Heat N. / Couléè N.	C	Si	Mn	P	S	Cr	Nl	Mo	Cu	W	N		PRE	FERRITE
45687	0,013	0,450	0,70	0,023	0,0004	25,65	6,85	3,61	0,68	0,600	0,2425		41.443	49.6

Prove
Tests/Tests

Altri G-48 MET.A
Others
Autres

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156-1 LAST ED. AND MR 0103-ed.12
CERTIFIED ACC.TO PED 97/23/EC
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTORY
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262 Pr E
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.:28802/15
- MATERIAL AND TESTS ACCORDING TO M-630 REV.6 - MDS D53 REV.5
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT WITH RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication
Formato a freddo Cold formed Formés à froid
Senza saldatura Seamless Sans soudure

Ispezione
Inspection/inspéction
Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1130°C

Solution Annealing at 1130°C , water quenching

Hypertrempés à 1130°C

Heat treatment soaking time for 30 minutes, batch n. 0937

Guaranteed caracteristics (A.M. du 24.03.78)
Caracteristiques garanties pour Z2CN18-10 et Z2CND17-13
C <= 0.25% Rm <= 760 N/mm2
S <= 0.05% Rm(A-2) <= 10500 N/mm2
P <= 0.05% A% sur 5,65√ So >= 16

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur
ROSETTI MARINO
Supply Management Dept.

☐ Witness ☒ Review

raccortubi Heat num. or Pcs. marking: 11815A05 - Qty:5.00
Customer: ROSETTI MARINO S.p.A.
Description: TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 510 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEITI2024000002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

SIDER TEST S.r.l
Laboratorio Prove e Collaudi Controlli Non Distruttivi
Mechanical and Chemical Laboratory Non Destructive Test
Sede legale ed amministrativa:
Strada della Barianella, 1/B - I-29015 Castel San Giovanni (PC)
U.O. Sede B: Viale dell'industria, 25 - I-29015 Castel San Giovanni (PC)
Tel.+39 0523 881.900 Fax+39 0523 842.903
http:\\www.sidertest.it sidertest@sidertest.it

RAPPORTO DI PROVA
TEST REPORT

G48ACE 28802 / 15 Page 1 of 1
S.I.M. No.: 9318 / 15 F.C.P. No.: 9318 / 15 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**					Ordine / Order	**MASTER PLAN DICEMBRE 2015/1**		Commessa / Job	**30012/15 15/1149**
Subcliente/Subcustomer /									
Descrizione / Description	**RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S**	Quantità / Quantity	**46**	Posizione / Item	**28**	Prova Nr. / Test. Nr.	**1052/15**	Colata / Heat	**45687**	Materiale / Material	**ASTM A 815-14 UNS S32760**

Campione fornito dal Cliente / Sample supplied by the Customer: RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S

Prova di "pitting" in ferro-cloruro **Ferric chloride pitting test** **Specifica: Specification: RTX_D53 Rev.7**

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Direzione e Posizione / Location	Note / Remarks
1052/15	140052	ASTM G 48-11 - Met. A	B L FT	

Dimensioni / Dimensions

Lunghezza - L (mm): 49,70 Larghezza - W (mm): 24,30 Spessore - T (mm): 6,90
Length - L (mm): Width - W (mm): Thickness - T (mm):

Area (cm²): [(LxWx2) + (WxTx2) + (LxTx2)] / 100 34,37
Area (cm²):

Provino in Materiale Base
Specimen in Base Material

Preparazione provino: Meccanica ☑ Chimica ☐
Specimen preparation: Mechanical Chemical

Temperatura di prova (°C): 50 Soluzione: FeCl3 · 6H2O 10% WATER SOLUTION
Test temperature (°C): Solution:

Tempo di esposizione (ore): 24
Exposure time (hours):

Data e ora inizio: 04/12/2015 08:00:00 Data e ora fine: 05/12/2015 08:00:00
Initial date and time: End date and time:

Peso iniziale (g): 62,0546 Peso finale (g): 62,0544 Perdita totale di peso (g): 0,0002
Initial weight (g): Final weight (g): Weight total loss(g):

Perdita di massa g/m² **0,0 ± 0,3**
Specimen mass loss

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X
NOT PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata (cm²): (LxWx2)/100: 24,15
Examined area (cm²):

Media della profondità dei pit (µm): 0,00
Average of pits depth (µm):

No. Pit lato A(superficie): 0,00 No. Pit lato B: 0,00 Pit per cm²: 0,00
Nr. Pit side A (surface): Nr. Pit side B:

Massima profondità dei pit (µm): 0,00
Maximum pit depth (µm):

Limite perdita di massa g/m² max.: 4,0
Limit Specimen mass loss max.

Esito delle prove / Result of tests: Conforme a 'Specifica' / Compliant with 'Specification'

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k = 2, which for a normal distribution provides a level of confidence of approximately 95% (according to EA-4/16 rev. 00 - 2003).

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente a) We declare that this test report refers only to the examined sample supplied by the Customer.
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta b) We declare that this test report cannot be partially reproduced without our written approval.
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. c) Compliance with documents in "Specification" refers only to the tests described on this test report.
d) Il campionamento dei provini viene eseguito dal Cliente. d) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
03/12/2015	**10/12/2015**					**Stefano Antonielli**	**Paolo Amani**

firmato elettronicamente - electronically signed

R_Rpt_G48ACE dt. 11/09/2015

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 11815A05 - Qty:5,00
Customer: ROSETTI MARINO S.p.A.
Description: TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 510 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

SIDER TEST S.r.l
Laboratorio Prove e Collaudi Controlli Non Distruttivi
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Sede legale ed amministrativa:
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RAPPORTO DI PROVA
TEST REPORT
E562 28802 / 15 Page 1 of 1
S.I.M. No.: 9318 / 15 F.C.P. No.: 9318 / 15 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**					Ordine / Order	**MASTER PLAN DICEMBRE 2015/1**		Commessa / Job	**30012/15** **15/1149**
Subcliente/Subcustomer /									
Descrizione / Description	**RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S**	Quantità / Quantity	**46**	Posizione / Item	**28**	Prova Nr. / Test. Nr.	**1052/15**	Colata / Heat	**45687**	Materiale / Material	**ASTM A 815-14 UNS S32760**

Campione fornito dal Cliente / Sample supplied by the Customer: RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti **Determining volume fraction by systematic manual point count** **Specifica: Specification: RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Direzione e Posizione / Location			Note / Remarks	Data esecuzione / Date of Testing
1052/15	140048	ASTM E 562-11	B	T	FT		09/12/2015

FORMULE USATE
(Formulas used)

Percentuale media di punti (Pp): / Average Percentage of Points (Pp): $Pp = 1/n \times \sum_{i=1}^{n} Pp(i)$

Deviazione Standard (s): / Standard Deviation (s): $s = \left[\frac{1}{n-1} \sum_{i=1}^{n} (Pp(i) - Pp)^2 \right]^{1/2}$

95% Intervallo di scarto (95% Cl): / 95% Confidence Interval (95%Cl): $95\%Cl = \frac{2.0 \times s}{(n-1)^{1/2}}$

Errore (%): / Error (%): $\frac{95\%Cl \times 100}{Pp}$

Frazione di Volume (Vv%): / Volume Fraction (Vv %): $Vv = Pp \pm 95\%Cl$

RISULTATI (Min. 40%, Max. 55%)
Results (Min. 40%, Max. 55%)

Vv (% Frazione di volume della Ferrite) / Vv (% Volume fraction of the constituent):	49,6 ± 1,5
% Errore (RA): / % Error (RA):	3,0
Nr. di campi per provino/sezione/spaziatura/angolo: / Nr. of fields for specimens/section/spacing/angle:	30 / 6 x 20 mm / 1 x 3 mm / 45°
Preparazione del provino: / Sample preparation:	20% NaOH
Ingrandimento: / Magnification:	500 X
Misura del reticolo: / Grid size:	40 mm x 40 mm 5 x 5 = 25 Points

% Frazione di volume della Ferrite per ciascun campo esaminato
% Volume fraction of the costituent for each metallographic section

1	42
2	44
3	50
4	48
5	52
6	54
7	48
8	42
9	52
10	54
11	52
12	52
13	52
14	52
15	52
16	48
17	44
18	46
19	54
20	52
21	46
22	52
23	42
24	54
25	54
26	46
27	54
28	50
29	48
30	52

Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k = 2, which for a normal distribution provides a level of confidence of approximately 95% (according to EA-4/16 rev. 00 - 2003).

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
b) We declare that this test report cannot be partially reproduced without our written approval.
c) Compliance with documents in "Specification" refers only to the tests described on this test report.
d) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
03/12/2015	**10/12/2015**					**Stefano Antonielli**	**Paolo Amani**

firmato elettronicamente - electronically signed

R_Rpt_E562 dt. 22/09/2015

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of Law and therefore the Laboratory may take legal action.*

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 11815A05 - Qty:5,00
Customer: ROSETTI MARINO S.p.A.
Description: TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 510 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC2024000004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

SIDER TEST S.r.l
Laboratorio Prove e Collaudi Controlli Non Distruttivi
Mechanical and Chemical Laboratory Non Destructive Test
Sede legale ed amministrativa:
Strada della Barianella, 1/B - I-29015 Castel San Giovanni (PC)
U.O. Sede B: Viale dell'Industria, 25 - I-29015 Castel San Giovanni (PC)
Tel.+39 0523 881.900 Fax+39 0523 842.903
http:\\www.sidertest.it sidertest@sidertest.it

RAPPORTO DI PROVA
TEST REPORT

ANL 28802 / 15 Page 1 of 1
S.I.M. No.: 9318 / 15 F.C.P. No.: 9318 / 15 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer	**Tecninox Srl Via Don Spagnoli. 5 29010 Sarmato PC**	Ordine / Order	**MASTER PLAN DICEMBRE 2015/1**
Subcliente/Subcustomer	/	Commessa / Job	**30012/15** / **15/1149**

Descrizione / Description	**RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S**	Quantità / Quantity	**46**	Posizione / Item	**28**	Prova Nr. / Test. Nr.	**1052/15**	Colata / Heat	**45687**	Materiale / Material	**ASTM A 815-14 UNS S32760**

Campione fornito dal Cliente / Sample supplied by the Customer: RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S

ANALISI SPETTROMETRICA AD EMISSIONE ATOMICA SOTTOVUOTO **Atomic emission vacuum Spectrometric analysis** **Specifica: Specification: RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Direzione e Posizione / Location		Temp. / Temp. (°C)	Note / Remarks	Data esecuzione / Date of Testing
1052/15	140055	PO 04-145 RC R00	B	UP	20		05/12/15

		Min.	Max.			Min.	Max.		Min.	Max.
C %	0,017		0,030	Al %				Zr %		
Si %	0,50		1,00	Co %				Zn %		
Mn %	0,72		1,00	Nb %				O %		
P %	0,025		0,030	Ti %				Fe %		
S %	0,005		0,010	* W %	0,62	0.50	1,00	Ca %		
Cr %	25,8	24,0	26,0	Pb %				Ta %		
V %				Sn %				Sb %		
Mo %	3,7	3,0	4,0	As %				H %		
Ni %	6,9	6,0	8,0	B %				Cd %		
Cu %	0,68	0,50	1,00	N %	0,26	0,20	0,30	Se %		
Ce %				La %				Bi %		
				Mg %				Hg %		

FORMULE / FORMULAS	Min.	Max.
PREN	42,2	40,0	

ID Gruppo / Group ID: 1893

Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il simbolo * antecedente l'elemento indica una prova non accreditata da ACCREDIA
e) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
b) We declare that this test report cannot be partially reproduced without our written approval.
c) Compliance with documents in "Specification" refers only to the tests described on this test report.
d) The * symbol before the element indicates that the test is not accredited by ACCREDIA.
e) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial) Th(Through Thickness)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/a (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
03/12/2015	**10/12/2015**					**Stefano Antonielli**	**Paolo Amani**

R_Rpt_ANL dt. 07/01/2015

firmato elettronicamente - electronically signed

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and Company/Laboratory may take legal action.*

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 11815A05 - Qty:5.00

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 510 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010

Protocol: CTCERC2024000004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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RAPPORTO DI PROVA
TEST REPORT

DUR 28802 / 15 Page 1 of 1

S.I.M. No.: 9318 / 15 F.C.P. No.: 9318 / 15 A / A

LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer	**Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**	Ordine / Order	**MASTER PLAN DICEMBRE 2015/1**
Subcliente/Subcustomer	/		

Commessa / Job	Descrizione / Description	Quantità / Quantity	Posizione / Item	Prova Nr. / Test. Nr.	Colata / Heat	Materiale / Material
30012/15 / **15/1149**	**RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S**	**46**	**28**	**1052/15**	**45687**	**ASTM A 815-14 UNS S32760**

Campione fornito dal Cliente / Sample supplied by the Customer: RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S

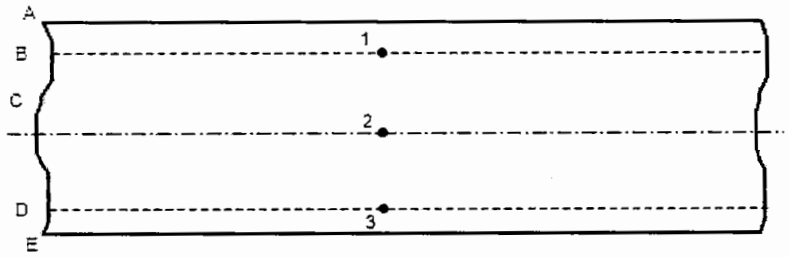
PROVA DI DUREZZA HBW (Strumento di misura dell'impronta di Tipo A)
HBW hardness test (Indentation measuring device Type A)

Specifica: Specification: RTX_D53 Rev.7

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Posizione di prelievo / Test position	Durezza / Hardness	Note / Note	Data esecuzione / Date of Testing
1052/15	140047	ASTM E 10-12	B T	HBW 2,5/187,5		04/12/2015

Minimo richiesto / Min. Request — Rich. Ord. / Ord. Reqs ☐

Massimo richiesto / Max. Request — **270** — Rich. Ord. / Ord. Reqs ☐



Valori ottenuti / Hardness Numbers

1	2	3
265	**267**	**267**

Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
b) We declare that this test report cannot be partially reproduced without our written approval.
c) Compliance with documents in "Specification" refers only to the tests described on this test report.
d) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
03/12/2015	**10/12/2015**			ROSETTI MARINO Supply Management Dept.		**Davide Morresi**	**Paolo Amani**
R_Rpt_DUR1 dt. 13/03/2012				☐ Witness	☑ Review	firmato elettronicamente - electronically signed	

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pcs. marking: 1181SA05 - Qty:5,00

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 510 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

SIDER TEST S.r.l
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Mechanical and Chemical Laboratory Non Destructive Test
Sede legale ed amministrativa:
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http:\\www.sidertest.it sidertest@sidertest.it

RAPPORTO DI PROVA
TEST REPORT
MIC 28802 / 15 Page 1 of 2
S.I.M. No.: 9318 / 15 F.C.P. No.: 9318 / 15 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer	**Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**				Ordine / Order	**MASTER PLAN DICEMBRE 2015/1**		Commessa / Job	**30012/15 15/1149**
Subcliente/Subcustomer	/								
Descrizione / Description	**RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S**	Quantità / Quantity	**46**	Posizione / Item	**28**	Prova Nr. / Test. Nr.	**1052/15**	Colata / Heat	**45687**
Materiale / Material	**ASTM A 815-14 UNS S32760**								

Campione fornito dal Cliente / Sample supplied by the Customer: RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S

ESAME MICROGRAFICO
Micrographic examination

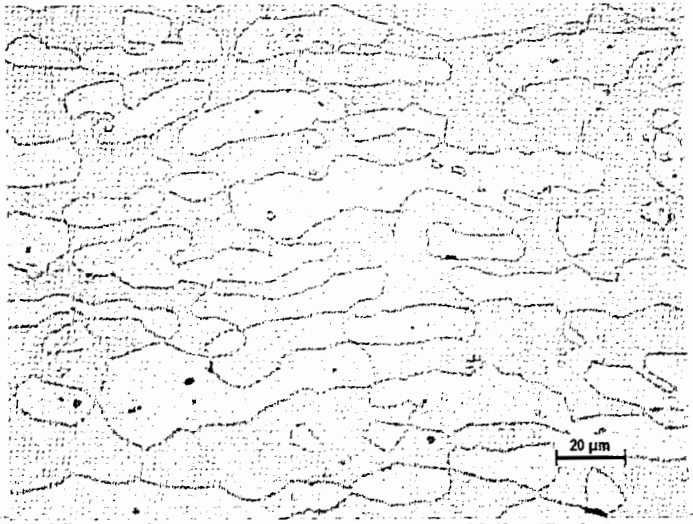
Specifica Specification: RTX_D53 Rev.7 + STATOIL -2010080 Rev.0

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Direzione e Posizione / Location			Data esecuzione / Date of Testing
1052/15	140049	ASTM E 3-11+ASTM E 407-07e1	B	T	FT	09/12/2015

Attacco / Etching: 10% Oxalic

Ingrandimento / Enlargement: 500 X

Area esaminata / Area examined: Materiale base / Base Material 10.0 x 20.0 = 200.0 mm²



Note / Remarks: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da nitruri. / Structure free from nitrides.

Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
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c) Compliance with documents in "Specification" refers only to the tests described on this test report.
d) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/a (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
03/12/2015	**10/12/2015**			ROSETTI MARINO Supply Management Witness	**Stefano Antonielli**	**Paolo Amani**

R_Rpt_MIC dt. 05/05/2015

firmato elettronicamente - electronically signed

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pcs. marking: 11815A05 - Qty:5.00
Description: TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS
Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 510 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

SIDER TEST S.r.l
Laboratorio Prove e Collaudi Controlli Non Distruttivi
Mechanical and Chemical Laboratory Non Destructive Test
Sede legale ed amministrativa:
Strada della Barianella, 1/B - I-29015 Castel San Giovanni (PC)
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RAPPORTO DI PROVA
TEST REPORT
MIC 28802 / 15 Page 2 of 2
S.I.M. No.: 9318 / 15 F.C.P. No.: 9318 / 15 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

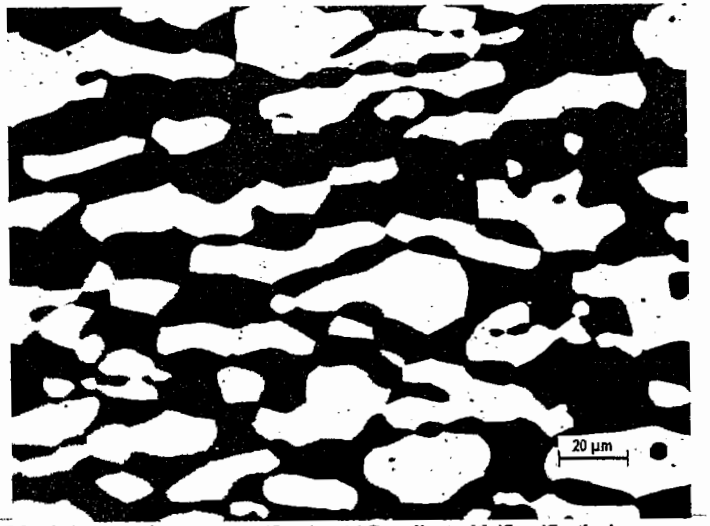
Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**	Ordine / Order	**MASTER PLAN DICEMBRE 2015/1**	Commessa / Job **30012/15** **15/1149**
Subcliente/Subcustomer /			

ESAME MICROGRAFICO
Micrographic examination

Specifica Specification: RTX_D53 Rev.7 + STATOIL -2010080 Rev.0

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Direzione e Posizione / Location			Data esecuzione / Date of Testing
1052/15	140050	ASTM E 3-11+ASTM E 407-07e1	B	T	FT	09/12/2015

Attacco / Etching: 20% NaOH
Ingrandimento / Enlargement: 500 X
Area esaminata / Area examined: Materiale base / Base Material 10.0 x 20.0 = 200.0 mm²



Note / Remarks: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano, fasi intermetalliche e precipitati./Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
b) We declare that this test report cannot be partially reproduced without our written approval.
c) Compliance with documents in "Specification" refers only to the tests described on this test report.
d) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
03/12/2015	**10/12/2015**				ROSETTI MARINO Supply Management Dept	**Stefano Antonielli**	**Paolo Amani**

R_Rpt_MIC dt. 05/05/2015

Witness ☐ Review ☐ firmato elettronicamente - electronically signed

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pcs. marking: 1181SA05 - Qty:5.00
Customer: ROSETTI MARINO S.p.A.
Description: TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 510 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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Mechanical and Chemical Laboratory Non Destructive Test
Sede legale ed amministrativa:
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RAPPORTO DI PROVA
TEST REPORT

A923A 28802 / 15 Page 1 of 1

S.I.M. No.: 9318 / 15 F.C.P. No.: 9318 / 15 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer	**Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**	Ordine / Order	**MASTER PLAN DICEMBRE 2015/1**
Subcliente/Subcustomer	/	Commessa / Job	**30012/15** / **15/1149**

Descrizione / Description	**RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S**	Quantità / Quantity	**46**	Posizione / Item	**28**	Prova Nr. / Test. Nr.	**1052/15**	Colata / Heat	**45687**	Materiale / Material	**ASTM A 815-14 UNS S32760**

Campione fornito dal Cliente / Sample supplied by the Customer: RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio
Detecting Detrimental Intermetallic Phase: Sodium Hydroxide Etch Test

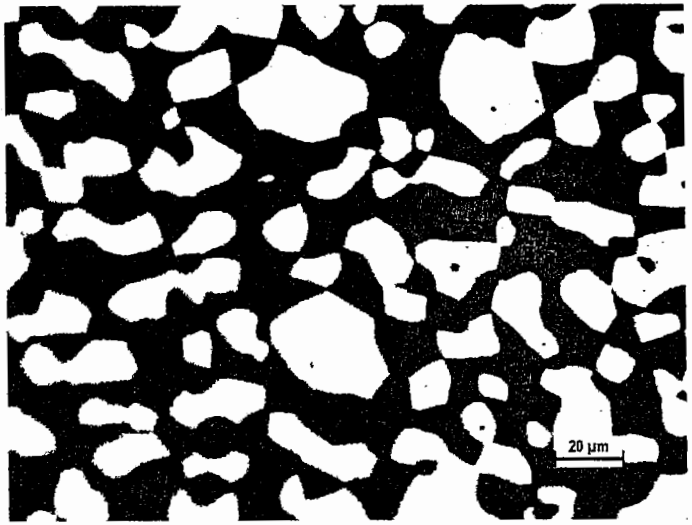
Specifica Specification: RTX_D53 Rev.7 + STATOIL -2010080 Rev.0

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Direzione e Posizione / Location			Temp. / Temp. (°C)	Data esecuzione / Date of Testing
1052/15	140054	ASTM A 923-14 (Met. A)	B	T	FT	20	09/12/2015

Attacco / Etching: 20% NaOH

Ingrandimento / Enlargement: 500 X

Area esaminata / Area examined: Materiale base / Base Material



Note / Remarks: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano, fasi intermetalliche e precipitati./Structure free from grain boundary carbides, intermetallic phases and precipitates.
Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure.

Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
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d) Il campionamento dei provini viene eseguito dal Cliente.

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d) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/a (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
03/12/2015	**10/12/2015**			ROSETTI MARINO Supply Management Dept		**Stefano Antonielli**	**Paolo Amani**
				Witness	Revie	firmato elettronicamente - electronically signed	

R_Rpt_A923A dt. 05/09/2012

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pos. marking: 11815A05 - Qty:5,00

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 510 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

SIDER TEST S.r.l
Laboratorio Prove e Collaudi Controlli Non Distruttivi
Mechanical and Chemical Laboratory Non Destructive Test
Sede legale ed amministrativa:
Strada della Barianella, 1/B - I-29015 Castel San Giovanni (PC)
U.O. Sede B: Viale dell'industria, 25 - I-29015 Castel San Giovanni (PC)
Tel.+39 0523 881.900 Fax+39 0523 842.903
http:\\www.sidertest.it sidertest@sidertest.it

RAPPORTO DI PROVA
TEST REPORT

A923C 28802 / 15 Page 1 of 1

S.I.M. No.: 9318 / 15 F.C.P. No.: 9318 / 15 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**						Ordine / Order	**MASTER PLAN DICEMBRE 2015/1**	Commessa / Job	**30012/15 15/1149**
Subcliente/Subcustomer /									
Descrizione / Description **RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S**	Quantità / Quantity **46**	Posizione / Item **28**	Prova Nr. / Test. Nr. **1052/15**	Colata / Heat **45687**	Materiale / Material **ASTM A 815-14 UNS S32760**				

Campione fornito dal Cliente / Sample supplied by the Customer: RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S

Individuazione di fasi intermetalliche dannose: Prova di corrosione per "pitting" in cloruro ferrico **Specifica: Specification: RTX_D53 Rev.7**

Detecting Detrimental Intermetallic Phase: Ferric Chloride Pitting Corrosion Test

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Direzione e Posizione / Location	Note / Remarks
1052/15	140053	ASTM A 923-14 (Met. C)	B L FT	No pitting at 20X.

Dimensioni / Dimensions

Lunghezza (mm): / Length (mm): 48,87
Larghezza (mm): / Width (mm): 25,11
Spessore (mm): / Thickness (mm): 6,80
Area (cm²): / Area (cm²): 34,60

Provino in Materiale Base / Specimen in Base Material

Preparazione provino: / Specimen preparation: Meccanica / Mechanical ☑ Chimica / Chemical ☐

Temperatura di prova (°C): / Specimen preparation (°C): 50

Tempo esposizione (ore): / Specimen preparation (hours): 24

Soluzione: / Solution: FeCl3 · 6H2O 10% water solution

Peso iniziale (g): / Initial weight (g): 65,6918
Peso finale (g): / Final weight (g): 65,6909
Perdita di peso (g): / Weight loss (g): 0,0009
Perdita della massa (g/m²): / Specimen mass loss: 0,3
Velocità di corrosione (mg/(dm²*d)) / Corrosion rate (mg/(dm²*d)): 2,6 ± 2,0
Data inizio: / Initial date: 04/12/2015 08:00:00
Data fine: / End date: 05/12/2015 08:00:00

Limite velocità di corrosione (mg/(dm²*d)) max.: 10,0
Corrosion rate limit (mg/(dm²*d)) max.

Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k = 2, which for a normal distribution provides a level of confidence of approximately 95% (according to EA-4/16 rev. 00 - 2003).

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
b) We declare that this test report cannot be partially reproduced without our written approval.
c) Compliance with documents in "Specification" refers only to the tests described on this test report.
d) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
03/12/2015	**10/12/2015**			ROSETTI MARINO Supply Management Dept Business Review		**Stefano Antonielli**	**Paolo Amani**
						firmato elettronicamente - electronically signed	

R_Rpt_A923C dt. 29/07/2015

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pcs. marking: 11815A05 - Qty:5.00

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 510 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000010

Protocol: CTCERC2024000046 95 * CERTIFIED TRUE COPY * Issued 20-05-2024

SIDER TEST S.r.l
Laboratorio Prove e Collaudi Controlli Non Distruttivi
Mechanical and Chemical Laboratory Non Destructive Test
Sede legale ed amministrativa:
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RAPPORTO DI PROVA
TEST REPORT

PM 28802 / 15 Page 1 of 1

S.I.M. No.: 9318 / 15 F.C.P. No.: 9318 / 15 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer	**Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**	Ordine / Order	**MASTER PLAN DICEMBRE 2015/1**
Subcliente/Subcustomer	/	Commessa / Job	**30012/15 / 15/1149**

Descrizione / Description	**RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S**	Quantità / Quantity	**46**	Posizione / Item	**28**	Prova Nr. / Test. Nr.	**1052/15**	Colata / Heat	**45687**	Materiale / Material	**ASTM A 815-14 UNS S32760**

Campione fornito dal Cliente / Sample supplied by the Customer: RED. TEES 1.1/2" x 3/4" SCH. 40S / 40S

PROVA DI TRAZIONE — **Tensile test**

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Dimensioni Wth Ø / Width ØPipe (mm)	Lo / Lo	Posizione di prelievo / Test position	Temp. / Temp. (°C)	Snervamento / Yield strength (MPa)		Rottura / Tensile strength Rm (MPa)	Allungamento / Elongation A (%)	Strizione / Area Reduction Z (%)	S/R Ratio Yield strength / Tensile strength	Data esecuzione / Date of Testing
1052/15	140046	ASTM A 370-13 (Tension Test)	3,82 12,53	50,00	B L FT	23	(≥ 550) Rp0,2%	**634**	(750÷895)	**881**	(≥ 25,0)	**30,9**		09/12/2015

Specifica / Specification: RTX_D53 Rev.7 — **Note /Remarks:** — **Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'**

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA.
e) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
b) We declare that this test report cannot be partially reproduced without our written approval.
c) Compliance with documents in "Specification" refers only to the tests described on this test report.
d) The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
e) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial) Th(Through Thickness)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Emesso / Emitted	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
03/12/2015	**10/12/2015**			☐ Witness	☑ Review	**Davide Morresi**	**Paolo Amani**

ROSETTI MARINO *Supply Management Dept.*

firmato elettronicamente - electronically signed

R_Rpt_TRP dt. 27/09/2013

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pcs. marking: 10055A022 - Qty:7.00

Description: TEE RID. 1.1/2"x1" SCH.40/S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 520 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5
29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente Customer/ RACCORTUBI S.p.A.

Ordine N. P.O.N./C.N. Master plan Febbraio 2022/1

Pos. N. Item/Poste 28 **Q.tà** Q.ty/Q.té 45

(*) Marcatura e cert. N. Material Marking e Cert. N. 1005SA022

Created on: 23-02-2022

Descrizione Description Description RED.TEES 1.1/2"x1" SCH.40/S SEAMLESS

Specifica Specification Spécification BW FITTINGS TO ASTM A/815M-2020
ASME SA/815 Latest edition UNS S32760
DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: TUBACEX Cert. No.: 705701
Raw material - manufacturer/Materiel du depart - fabriquant: SMLS PIPES TO ASTM A-790 UNS S32760
TUBACEX Cert. No.: 705701

Test produzione
Production test/Coupon de production

Caratteristiche meccaniche
Mechanical Properties/Caracteristiques Mechaniques

Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS

Colata N. Heat N. Couléè N.	N. prova Specimen N. Echantil. N.	Snervamento Yield strength Limite d'elasticité N/mm2	Rottura Tensile Resistance à la traction N/mm2	Allungam. % Elongation Allongement 2"	Durezza Hardness as per NACE MR01-75	Durezza Hardnes Dureté	Resilienza Impact energy Resilience Joules
56144	412/21	619	866	27.8	HRC<28	HRC 25	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Couléè N.	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Nb	Co	N	W	PRE	FERRITE
56144	0,013	0,260	0,67	0,020	0,0004	25,55	6,95	3,65	0,62	0,002	0,045	0,2540	0,63	41.659	48.7

Prove
Tests/Tests

Altri Others Autres G-48 MET.A

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/EU annex I para 4.3
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTORY
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262 Pr E
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.: 4211/22
- MATERIAL AND TESTS ACCORDING TO M-630 REV.7 - MDS D53 REV.6
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT WITH RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication

Formato a freddo	Senza saldatura
Cold formed	Seamless
Formés à froid	Sans soudure

Ispezione
Inspection/inspéction
Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1130°C

Solution Annealing at 1130°C , water quenching

Hypertrempés à 1130°C

Heat treatment soaking time for 20 minutes, batch n. 0849

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur
ROSETTI MARINO
Supply Management Dept.

☐ Witness ☑ Review

341/996

raccortubi Heat num. or Pcs. marking: 1005SA022 - Qty:7,00
Description: TEE RID. 1.1/2"x1" SCH.40/S SEAMLESS
Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 520 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

G48ACE 4211 / 22

Rif. Lab SIM (FCP) : **1274 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/Customer	Ordine/Order	Commessa/Job
Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC	**MASTER PLAN FEBBRAIO 2022/1**	**30002/22 21/1404**

Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		412/21	56144	**ASTM A 815-20 UNS S32760**

Prova di "pitting" in ferro-cloruro/ Ferric chloride pitting test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimensioni/ Dimension mm: Lunghezza/ Length	Larghezza/ Width	Spessore/ Thickness	Area/ Area cm²	
22327	ASTM G48 – 11 (R2020)e1 Method A	RTX_D53 Rev.9	B L FT	Meccanica/ Mechanical	49,84	21,43	3,61	26,51	[(LxWx2)+(WxTx2)+(LxTx2)] / 100

Temperatura di prova (°C)/ Test temperature (°C)	50	Peso iniziale/ Initial weight (g)	30,6412
Tempo di esposizione (ore)/ Exposure time (hours)	24	Peso finale (g)/ Final weight (g)	30,6405
Data e ora inizio/ Initial date and time	Data e ora fine/ End date and time	Perdita di peso (g)/ Weigth loss (g)	0,0007
28/02/2022 11:11:02	01/03/2022 11:11:02	Perdita di massa/ Specimen mass loss	0.3 g/m²
Soluzione/ Solution FeCl3 6% SOLUTION		**Limite perdita di massa max/ Limit Specimen mass loss max**	**1.0 g/m²**

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X / NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata/ Examined area cm² 21.36 (LxWx2)/100

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
24/02/2022	Antonielli Stefano	Amani Paola		ROSETTI MARINO Supply Management Dept.
Data Rapporto di prova/ Test Report Date: 01/03/2022 (firmato elettronicamente/electronically signed)				☐ Witness ☑ Review

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

raccortubi Heat num. or Pos. marking: 10055A022 - Qty:7,00
Customer: ROSETTI MARINO S.p.A.
Description: TEE RID. 1.1/2"x1" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 520 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000010
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

E562 4211 / 22

Rif. Lab SIM (FCP) : **1274 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **MASTER PLAN FEBBRAIO 2022/1**

Commessa/Job **30002/22 21/1404**

Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		412/21	56144	**ASTM A 815-20 UNS S32760**

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti/ Determining volume fraction by systematic manual point count

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Ingrandimento/ Enlargement	Misura del reticolo/ Grid size	Data esecuzione/ Date of Testing
22323	ASTM E562 – 19e1	RTX_D53 Rev.9 + STATOIL -2010080 Rev.0	B T FT	20% NaOH	500 X	Square 5 x 5 = 25 Points	25/02/2022

		Valore Min/ Value Min	Valore Max/ Value Max
Ferrite Vv (% Frazione di volume)/ Vv(% Volume Fraction)	48.7	40	55
s 3,9 95% C.I. 1,4	%RA 2,97		

Ferrite % Frazione di volume per ciascun campo esaminato/ % Volume Fraction for each metallographic section

1	48	2	54	3	50	4	46	5	44
6	44	7	42	8	44	9	50	10	54
11	48	12	44	13	50	14	54	15	52
16	42	17	48	18	50	19	50	20	46
21	52	22	48	23	52	24	46	25	52
26	52	27	44	28	54	29	54	30	46

Nr. di campi per provino/sezione/spaziatura/angolo/ Nr. of fields for specimens/section/angle: 30 / 4.00 x 20 mm / 1 x 3.0 mm / 45°

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

		Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
Data Ingresso Materiale/ Date of Material Arrival	24/02/2022				
Data Rapporto di prova/ Test Report Date	01/03/2022 firmato elettronicamente/electronically signed	Antonielli Stefano	Amani Paola		ROSETTI MARINO Supply Management Dept. Witness Review

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 10055A022 - Qty:7,00

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 1.1/2"x1" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 520 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000201O

Protocol: CTCERC2024000469S * CERTIFIED TRUE COPY * Issued 20-05-2024

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

ANL 4211 / 22

Rif. Lab SIM (FCP) : **1274 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/Customer	Ordine/Order	Commessa/Job
Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC	**MASTER PLAN FEBBRAIO 2022/1**	**30002/22 21/1404**

Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		412/21	56144	**ASTM A 815-20 UNS S32760**

ANALISI SPETTROMETRICA AD EMISSIONE ATOMICA A SCINTILLA/ Spark Atomic Emission Spectrometry

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Temperatura di prova (°C)/ Test temperature (°C)	ID Gruppo / Group ID	Unità di misura/ Unit of measure	Data esecuzione/ Date of Testing
22330	PO 04-145 RC R12:2021	RTX_D53 Rev.9	B / UP	20 °C	3813	% by weight	28/02/2022

			Min.	Max.				Min.	Max.				Min.	Max.
C	0,016	±0,003		0,030	Nb					Fe				
Si	0,30	±0,02		1,00	Ti					Ca				
Mn	0,70	±0,04		1,00	W	0,64	±0,06	0,50	1,00	Ta				
P	0,025	±0,004		0,030	Pb					Sb				
S	0,002	±0,001		0,010	Sn					H				
Cr	25,6	±0,4	24,0	26,0	As					Cd				
V					B					Se				
Mo	3,7	±0,2	3,0	4,0	N	0,26	±0,04	0,20	0,30	Bi				
Ni	7,1	±0,4	6,0	8,0	La					Hg				
Cu	0,64	±0,04	0,50	1,00	Mg									
Ce					Zr									
Al					Zn									
Co					O									

FORMULAS			Min.	Max.
*PREN	41,97	±0,74	40,00	

Decision rule:
the result is "Compliant to Specification" when:
- *Result-U ≥ Lower Limit (<2,5 %PFA)*
- *Result+U ≤ Upper Limit (<2,5 %PFA)*
- *Result-U≥ Lower Limit and Result+U≤ Upper Limit (<2,5 %PFA)*

When the result falls within the uncertainty range at the limit value, the result is Not Compliant.
Where U is the Uncertainty and PFA is the Probability of False Accept (ILAC-G8:09/2019)

The symbol * before the element or formula indicates a value that is outside the Laboratory's accredited range for that element/formula.The symbol (!) means that the sensitivity of the instrument does not satisfy the required number of significant digits.

Expanded uncertainty above reported is based on standard uncertainty multiplied by a coverage factor k = 2 that corresponds to a coverage probability of about 95% for a normal distribution. The evaluation is based on EA 4/16 Ed. 2003

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival	24/02/2022
Data Rapporto di prova/ Test Report Date	01/03/2022

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: Antonielli Stefano

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: Amani Paola

Ispettori/Inspector

Cliente/Customer: ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Test Position Legend: [/]-/: [B]-Specimen in Base Material: [UP]-external sup.

raccortubi Heat num. or Pos. marking: 1005SA022 - Qty:7,00
Description: TEE RID. 1.1/2"x1" SCH.40/S SEAMLESS
Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 520 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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Head Office: Stradu della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
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RAPPORTO DI PROVA/TEST REPORT

DUR 4211 / 22

Rif. Lab SIM (FCP) : **1274 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer	Ordine/Order	Commessa/Job
Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC	**MASTER PLAN FEBBRAIO 2022/1**	**30002/22 21/1404**

Campione fornito da cliente/Sample supplied by customer :

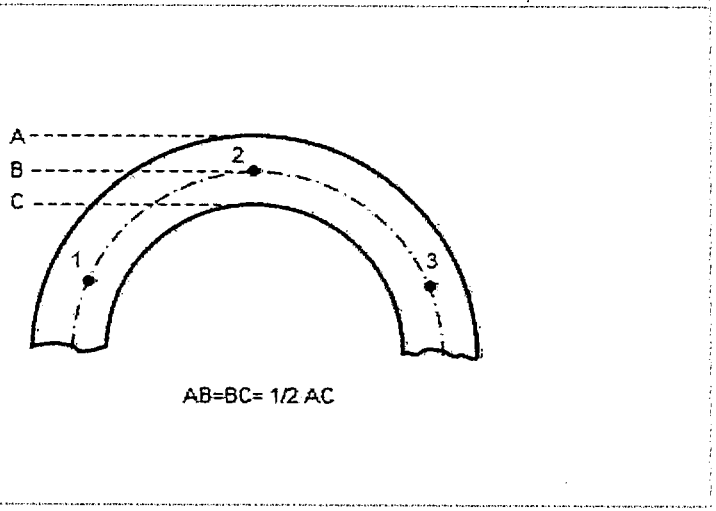
Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		412/21	56144	**ASTM A 815-20 UNS S32760**

PROVA DI DUREZZA HV10 - HV30 - HV5/ HV10 - HV30 - HV5 hardness test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position		Temp./ Temp.	Durezza/ Hardness	Data esecuzione/ Date of Testing
22322	ASTM E 92 – 17 (only Vickers)	RTX_D53 Rev.9	B	T	20 °C	HV10	28/02/2022

(B1) - Base Material **MAX 286**

HV10	1	255	2	253	3	257



Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

Position	Average	
(B1) - Base Material	255	HV10

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

		Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
Data Ingresso Materiale/ Date of Material Arrival	24/02/2022				
Data Rapporto di prova/ Test Report Date	01/03/2022	Morresi Davide	Amani Paola		

firmato elettronicamente/electronically signed

Test Position Legend: [B]-Specimen in Base Material; [SZ]-along the thickness; [T]-trasv.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

raccortubi
Heat num. or Pcs. marking: 10055A022 - Qty:7,00
Customer: ROSETTI MARINO S.p.A.
Description: TEE RID. 1.1/2"x1" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 520 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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RAPPORTO DI PROVA/TEST REPORT

MIC 4211 / 22

Rif. Lab SIM (FCP) : **1274 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **MASTER PLAN FEBBRAIO 2022/1**

Commessa/Job **30002/22 21/1404**

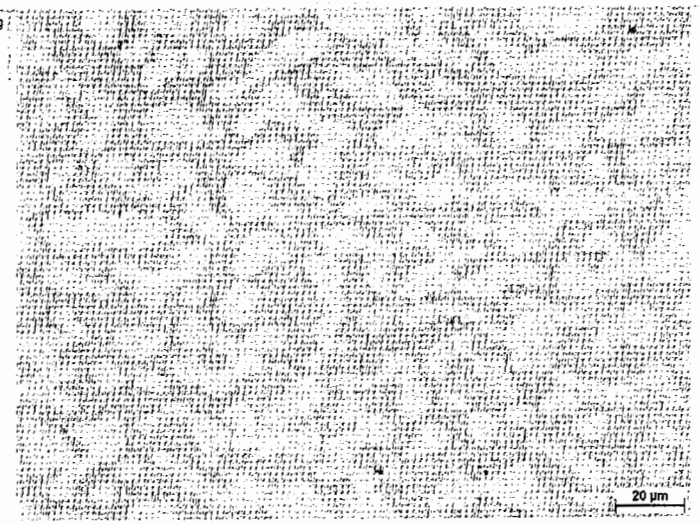
Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		412/21	56144	**ASTM A 815-20 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
22324	ASTM E3 – 11(R2017) + ASTM E407 – 07 (R2015)e1	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	25/02/2022

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	10% Oxalic	Specimen in Base Material 4.0 x 20.0 = 80.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da nitruri. / Structure free from nitrides.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival **24/02/2022**

Data Rapporto di prova/ Test Report Date **01/03/2022**
firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paola*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept.
Fitness Review

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi Heat num. or Pos. marking: 1005SA022 - Qty:7.00

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 1.1/2"X1" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 520 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

MIC 4211 / 22

Rif. Lab SIM (FCP) : **1274 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **MASTER PLAN FEBBRAIO 2022/1**

Commessa/Job **30002/22 21/1404**

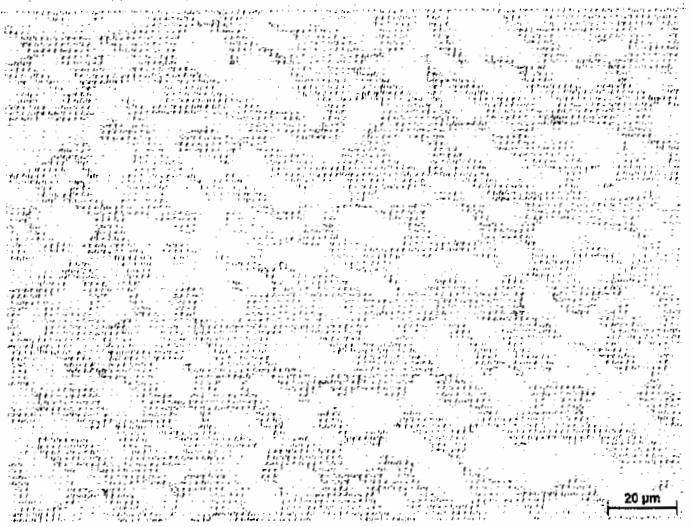
Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		**412/21**	**56144**	**ASTM A 815-20 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
22325	ASTM E3 – 11(R2017) + ASTM E407 – 07 (R2015)e1	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	25/02/2022

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	20% NaOH	Specimen in Base Material 4.0 x 20.0 = 80.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival	24/02/2022
Data Rapporto di prova/ Test Report Date	01/03/2022

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: Antonielli Stefano

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: Amani Paola

Ispettori/Inspector

Cliente/Customer: ROSETTI MARINO Supply Management Dept. ☐ Witness ☑ Review

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 1005SA022 - Qty:7,00

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 1.1/2"x1" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 520 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

SIDERTEST
mechanical chemical non destructive tests
Head Office: Stradu della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

A923A 4211 / 22

Rif. Lab SIM (FCP) : **1274 / 22 (A / A)**

ilac-MRA ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO LAB N° 0864 L

Cliente/Customer	Ordine/Order	Commessa/Job
Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC	**MASTER PLAN FEBBRAIO 2022/1**	**30002/22 21/1404**

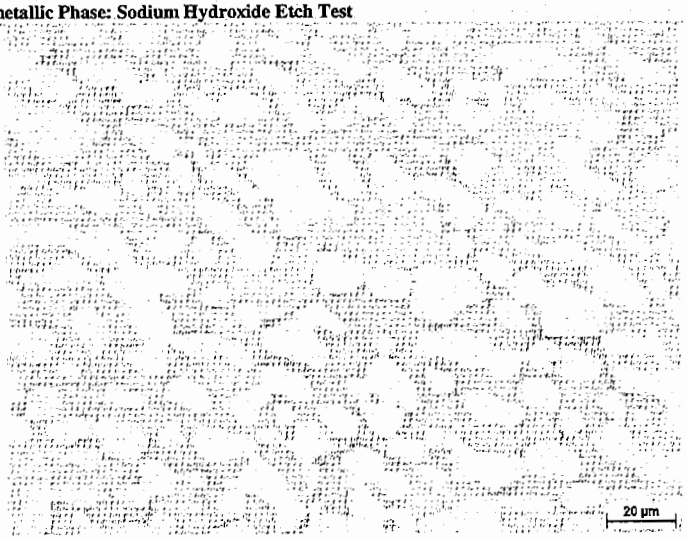
Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		412/21	56144	**ASTM A 815-20 UNS S32760**

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio/ Detecting Detrimental Intermetallic Phase: Sodium Hydroxide Etch Test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
22329	ASTM A923 – 14 Method A	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	25/02/2022

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	40g NaOH to 100g distilled water	Specimen in Base Material



Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure.

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
24/02/2022				
Data Rapporto di prova/ Test Report Date: **01/03/2022** firmato elettronicamente/electronically signed	*Antonielli Stefano*	*Amani Paolo*		ROSETTI MARINO Supply Management Dept. ☐ Witness ☑ Review

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 10055A022 - Qty:7,00

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 1.1/2"X1" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 520 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

A923C 4211 / 22

Rif. Lab SIM (FCP) : **1274 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/Customer	Ordine/Order	Commessa/Job
Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC	**MASTER PLAN FEBBRAIO 2022/1**	**30002/22 21/1404**

Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		412/21	56144	**ASTM A 815-20 UNS S32760**

Individuazione di fasi intermetalliche dannose: Prova di corrosione per "pitting" in cloruro ferrico/ Detecting Detrimental Intermetallic Phase: Ferric Chloride Pitting Corrosion Test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimensioni/ Dimension mm Lunghezza/ Length	Larghezza/ Width	Spessore/ Thickness	Area/ Area cm²
22328	ASTM A923 – 14 Method C	RTX_D53 Rev.9	B L FT	Meccanica/ Mechanical	50,05	21,45	3,62	26,65

Temperatura di prova (°C)/ Test temperature (°C) 50

Temperatura Minima Rilevata (°C)/ Minimum temperature observed (°C) 49,68

Temperatura Massima Rilevata (°C)/ Maximum temperature observed (°C) 50,55

Tempo di esposizione (ore)/ Exposure time (hours) 24

Data inizio/ Initial date	Data fine/ End date
28/02/2022 11:27:24	01/03/2022 11:27:24

Soluzione/ Solution FeCl3 · 6H2O 10% water solution

Peso iniziale/ Initial weight (g) 30,5151

Peso finale (g)/ Final weight (g) 30,5141

Perdita di peso (g)/ Weigth loss (g) 0,0010

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X /
NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Velocità di corrosione/ Corrosion speed (mg/(dm²*d)) **3,8**

Limite velocità di corrosione (mg/(dm²*d)) max./ Corrosion rate limit (mg/(dm²*d)) max. **10.0**

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
24/02/2022	Antonielli Stefano	Amani Paola		ROSETTI MARINO Supply Management Dept.
Data Rapporto di prova/ Test Report Date: 01/03/2022 (firmato elettronicamente/electronically signed)				☐ Witness ☒ Review

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

raccortubi Heat num. or Pcs. marking: 10055A022 - Qty:7,00

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 1.1/2"x1" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 520 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

SIDERTEST
mechanical chemical non destructive tests

Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY Tel. +39 0523 881900 Fax. +39 0523 842903
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY sidertest@sidertest.it www.sidertest.it

RAPPORTO DI PROVA/TEST REPORT

PM 4211 / 22

Rif. Lab SIM (FCP) : **1274 / 22 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **MASTER PLAN FEBBRAIO 2022/1**

Commessa/Job **30002/22 21/1404**

Campione fornito da cliente/Sample supplied by customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		412/21	56144	ASTM A 815-20 UNS S32760

PROVA DI TRAZIONE A TEMPERATURA AMBIENTE/ Tensile test at room temperature

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Dimensioni/ Dimension Wth mm	Ø / Width	ØPipe	Lo (mm)	Posizione di prelievo/ Test position	Temp./ Temp. °C	Snervamento/ Yield strength MPa		Rottura/ Tensile strength Rm MPa		Allungamento/ Elongation A (%)		Strizione/ Area Reduction Z (%)	S/R/ Ratio Yield strength / Tensile strength	Data esecuzione/ Date of Testing
22320	ASTM A370 – 21 §6+14, § A1.3, § A2.2 and § A3.2	RTX_D53 Rev.9	3,72	12,53		50,00	B L FT	23	(≥550) Rp0.2%	619	(≥750)	866	(≥25)	27,8			01/03/2022

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati /This test report refers only to the examinod sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result

Data Ingresso Materiale/ Date of Material Arrival: **24/02/2022**

Data Rapporto di prova/ Test Report Date: **01/03/2022** firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paola*

Ispettori/Inspector

Cliente/Customer

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness; [L]-long.

raccortubi Heat num. or Pos. marking: 1101SA02 - Qty:1.00

Description: TEE RID. 4"x1.1/2" SCH.10S/40S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 530 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010

Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5 - 29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Quality System

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente RACCORTUBI S.p.A.
Customer/Client

Ordine N. OS000097 S DEL 08/05/2012
P.O.N./Commande N.

Pos. N. 1 **Q.tà** 109
Item/Poste Q.ty/Q.té

(*) Marcatura e cert. N. 1101SA02 **Data:** 07-06-2012
Material Marking e Cert. N. Date:

Descrizione RED.TEES 4"x1.1/2" SCH.10S/40S
Description
Description

Specifica BW FITTINGS TO ASTM/ASME
Specification SA/A815-10a UNS S32760
Spécification DIMS/ENDS B16.9-2007

Materiale base - Fabbricante: TUBACEX Cert. No.: 543964
Raw material - manufacturer/Materiel du depart - fabriquant: SMLS PIPES TO ASTM A-790 UNS S32760 - TUBACEX Cert. No.: 543964

Test produzione Production test/Coupon de production	**Caratteristiche meccaniche** Mechanical Properties/Caracteristiques Mechaniques							
	Colata N. Heat N. Coulée N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement 2"	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS QTR: 01/SDSS/A Rev.1 Specimens location drawing as per relevant QTR	45292	981/12	623	805	37.4	HRC<28	HRC 24	SEE SIDER TEST CERTIFICATE 10076/12

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Coulée N.	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**Mo**	**Cu**	**W**	**N**		**PRE**	**FERRITE**
45292	0,018	0,480	0,71	0,024	0,0004	25,55	7,00	3,62	0,66	0,570	0,2570		41.608	46.80

Prove
Tests/Tests

Altri G-48 MET.A
Others
Autres

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156-1 LAST ED. AND MR 0103-ed.10
CERTIFIED ACC.TO PED 97/23/EG
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTORY
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262 Pr E
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.:10076/12
- MATERIAL AND TESTS ACCORDING TO M-650 REV.4 - MDS D53 REV.4
- HEAT TREATMENT LOT:0173
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT WITH RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).
- POSITIVE MATERIAL IDENTIFICATION ON 100% OF THE PIECES : SATISFACTORY

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication

Formato a freddo	**Senza saldatura**
Cold formed	Seamless
Formés à froid	Sans soudure

Ispezione
Inspection/inspéction

Esame visivo e dimensionale: Buono
Identificazione materiale: Buono

Visual and dimensional test: Satisfactory
Positive Material Identification: Satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: Satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique

Solubilizzazione a 1130°C

Solution Annealing at 1130°C , water quenching

Hypertrempés à 1130°C

Heat treatment soaking time for 30 minutes

Guaranteed caracteristics (A.M. du 24.03.78)
Caracteristiques garanties pour Z2CN18-10 et Z2CND17-13

C <= 0.25%	Rm <= 760 N/mm2
S <= 0.05%	Rm(A-2) <= 10500 N/mm2
P <= 0.05%	A% sur 5,65√ So >= 16

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☒ Review

raccortubi Heat num. or Pos. marking: 11015A02 - Qty:1.00
Customer: ROSETTI MARINO S.p.A.
Description: TEE RID. 4"x1.1/2" SCH.10S/40S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 530 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020 10
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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Mechanical and Chemical Laboratory Non Destructive Tests
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Tel.+39 0523 881.900 Fax. +39 0523 842.903
http://www.sidertest.it sidertest@sidertest.it

RAPPORTO DI PROVA
TEST REPORT
TRP 10076 / 12 Page 1 of 1
S.I.M. No.: 2789 / 12 F.C.P. No.: 2789 / 12 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**	Ordine *Order* **OS000097 S**	Commessa *Job*	**120/12 12/1293**
Subcliente/Subcustomer /			

Descrizione *Description*	**RED. TEES 4" x 1.1/2" SCH. 10S / 40S**	Quantità *Quantity*	**110**	Posizione *Item*	**1**	Prova Nr. *Test. Nr.*	**981/12**	Colata *Heat*	**45292**	Materiale *Material*	**ASTM A 815-10a UNS S32760**

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

PROVA DI TRAZIONE — ***Tensile test***

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Wth Ø / Width ØPipe (mm)*		Lo *Lo*	Posizione di prelievo *Test position*			Temp. *Temp. (°C)*	Snervamento *Yield strength (MPa)*		Rottura *Tensile strength Rm (MPa)*		Allungamento *Elongation A (%)*		Strizione *Area Reduction Z (%)*	S/R *Ratio Yield strength / Tensile strength*	Data esecuzione *Date of Testing*
981/12	45178	ASTM A 370-11a	9,56	12,5	50	B	L	FT	23	(≥ 550)	Rp0.2% **623**	(750/895)	**805**	(≥ 25)	**37,4**			15/06/2012

Specifica / *Specification:* **RTX_D53 Rev.4** **Note /*Remarks:*** **Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI RESILIENZA — ***Notched-bar impact test***

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Dimension Size Width Length*	Posizione di prelievo *Test position*		Tipo *Type*	Temp. *Temp. (°C)*	Valore *Absorbed energy*					Area di taglio *Shear area*		Espansione laterale *Lateral expansion*			Data esecuzione *Date of Testing*
									Single			*Average*	*Single (%)*	*Average (%)*	*Single (mm)*		*Average (mm)*	
981/12	45179	ASTM A 370-11a	7,5 x 10 x 55	B	L	1/2 KV	-51	**J** (≥ 51)	**188**	**187**	**186**	(≥ 60) **187**			(≥ 0,38) **2,55**	**2,47**	**2,44**	**2,49**	14/06/2012

Specifica / *Specification:* **RTX_D53 Rev.4** **Note /*Remarks:*** **Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente *a) We declare that this test report refers only to the examined sample supplied by the Customer.*
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta *b) We declare that this test report cannot be partially reproduced without our written approval.*
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. *c) Compliance with documents in "Specification" refers only to the tests described on this test report.*
d) Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. *d) The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.*

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*	Ispettore *Inspector*	Ispettore *Inspector*	Cliente *Customer*	Cliente *Customer*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
08/06/2012	**19/06/2012**				ROSETTI MARINO Supply Management Dept. Witness Review	***Marco Borile***	***Paolo Amani***
						firmato elettronicamente - electronically signed	

R_Rpt_TRP_A_BIS dt. 13/03/2012

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pcs. marking: 1101SA02 - Qty:1,00
Customer:
Description: TEE RID. 4"x1.1/2" SCH.10S/40S SEAMLESS
ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 530 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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RAPPORTO DI PROVA
TEST REPORT
MIC 10076 / 12 Page 1 of 2
S.I.M. No.: 2789 / 12 F.C.P. No.: 2789 / 12 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**				Ordine *Order*	**OS000097 S**	Commessa *Job*	**120/12 12/1293**
Subcliente/Subcustomer /							
Descrizione *Description* **RED. TEES 4" x 1.1/2" SCH. 10S / 40S**	Quantità *Quantity* **110**	Posizione *Item* **1**	Prova Nr. *Test. Nr.* **981/12**	Colata *Heat* **45292**	Materiale *Material*	**ASTM A 815-10a UNS S32760**	

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

ESAME MICROGRAFICO **Specifica** ***Specification:*** **RTX_D53 Rev.4 + STATOIL -2010080 Rev.0**
Micrographic examination

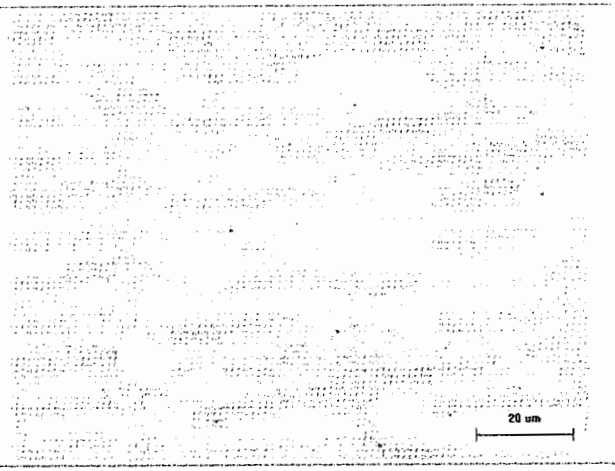
No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Direzione e Posizione *Location*	Temp. *Temp. (°C)*	Data esecuzione *Date of Testing*
981/12	45182	ASTM E3-11 + ASTM E407-07	B T FT	20	18/06/2012

Attacco: *Etching:* 10% Oxalic

Ingrandimento: *Enlargement:* 500 X

Area esaminata: *Area examined:* Materiale base / Base Material

Scala 1.5 : 1



Note: Struttura libera da nitruri. / Structure free from nitrides.
Remarks:

Esito delle prove / *Conclusion:* **Conforme a 'Specifica' / Compliant with 'Specification'**

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente *a) We declare that this test report refers only to the examined sample supplied by the Customer.*
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta *b) We declare that this test report cannot be partially reproduced without our written approval.*
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. *c) Compliance with documents in "Specification" refers only to the tests described on this test report.*

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch) T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*	Ispettore *Inspector*	Ispettore *Inspector*	Cliente *Customer*	Cliente *Customer*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
08/06/2012	**19/06/2012**			ROSETTI MARINO Supply Management Dept. Witness Review		***Stefano Antonielli***	***Paolo Amani***
						firmato elettronicamente - electronically signed	

R_Rpt_MIC_B_BIS_PDF dt. 13/03/2012

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pos. marking: 1101SA02 - Qty:1,00
Customer: ROSETTI MARINO S.p.A.
Description: TEE RID. 4"x1.1/2" SCH.10S/40S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 530 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020I0
Protocol: CTCERC20240000469S * CERTIFIED TRUE COPY * Issued 20-05-2024

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RAPPORTO DI PROVA
TEST REPORT
MIC 10076 / 12 Page 2 of 2
S.I.M. No.: 2789 / 12 F.C.P. No.: 2789 / 12 A / A

LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**	Ordine *Order*	**OS000097 S**	Commessa *Job* **120/12** **12/1293**
Subcliente/Subcustomer /			

ESAME MICROGRAFICO **Specifica** ***Specification:*** **RTX_D53 Rev.4 + STATOIL -2010080 Rev.0**
Micrographic examination

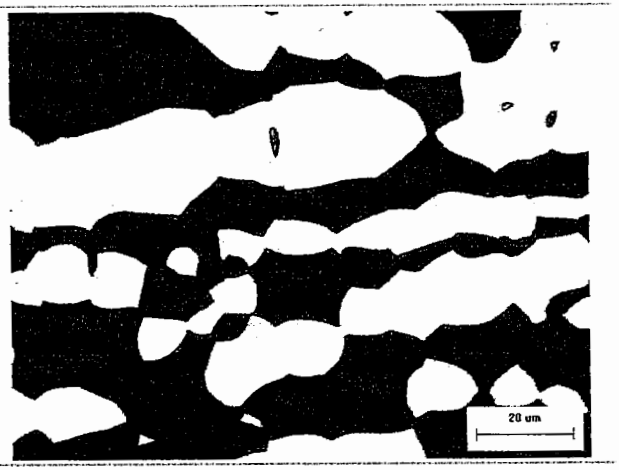
No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Direzione e Posizione *Location*	Temp. *Temp. (°C)*	Data esecuzione *Date of Testing*
981/12	45183	ASTM E3-11 + ASTM E407-07	B T FT	20	18/06/2012

Attacco: *Etching:* 20% NaOH

Ingrandimento: *Enlargement:* 500 X

Area esaminata: *Area examined:* Materiale base / Base Material

Scala 1.5 : 1



Note: Struttura libera da precipitazioni a bordo grano e fasi intermetalliche / Structure free from grain boundary carbides and intermetallic phases.
Remarks:

Esito delle prove / *Conclusion:* **Conforme a 'Specifica' / Compliant with 'Specification'**

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
b) We declare that this test report cannot be partially reproduced without our written approval.
c) Compliance with documents in "Specification" refers only to the tests described on this test report.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*	Ispettore *Inspector*	Ispettore *Inspector*	Cliente *Customer*	Cliente *Customer*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
08/06/2012	**19/06/2012**			ROSETTI MARINO Supply Management Dept.		***Stefano Antonielli***	***Paolo Amani***
				☐ Witness	☒ Review	*firmato elettronicamente - electronically signed*	

R_Rpt_MIC_B_BIS_PDF dt. 13/03/2012

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pcs. marking: 11015A02 - Qty:1.00
Customer: ROSETTI MARINO S.p.A.
Description: TEE RID. 4"x1.1/2" SCH.10S/40S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 530 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000201O
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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http://www.sidertest.it sidertest@sidertest.it

RAPPORTO DI PROVA
TEST REPORT
G48ACE 10076 / 12 Page 1 of 1
S.I.M. No.: 2789 / 12 F.C.P. No.: 2789 / 12 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC** — Ordine / *Order* **OS000097 S** — Commessa / *Job* **120/12 12/1293**
Subcliente/Subcustomer /

Descrizione / *Description*	Quantità / *Quantity*	Posizione / *Item*	Prova Nr. / *Test. Nr.*	Colata / *Heat*	Materiale / *Material*
RED. TEES 4" x 1.1/2" SCH. 10S / 40S	**110**	**1**	**981/12**	**45292**	**ASTM A 815-10a UNS S32760**

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

Prova di "pitting" in ferro-cloruro — ***Ferric chloride pitting test*** — **Specifica: *Specification:* RTX_D53 Rev.4**

No. Prova / *Specimen*	ID Prova / *ID Specimen*	Metodo di prova / *Test method*	Direzione e Posizione / *Location*	Note / *Remarks*
981/12 - 1	45185	ASTM G48-11 - Met. A	B L FT	

Dimensioni / *Dimensions*

Lunghezza - L (mm): 50,00 — *Length - L (mm):*
Larghezza - W (mm): 24,66 — *Width - W (mm):*
Spessore - T (mm): 8,30 — *Thickness - T (mm):*

Area (cm²): [(LxWx2) + (WxTx2) + (LxTx2)] / 100 — *Area (cm²):* 37,05

Provino in Materiale Base
Specimen in Base Material

Preparazione provino: Meccanica ☑ Chimica ☐
Specimen preparation: Mechanical Chemical

Temperatura di prova (°C): 50 — *Test temperature (°C):*
Soluzione: FeCl3 · 6H2O 10% WATER SOLUTION — *Solution:*

Tempo di esposizione (ore): 24
Exposure time (hours):

Data e ora inizio: 14/06/2012 16.00.00 — *Initial date and time:*
Data e ora fine: 15/06/2012 16.00.00 — *End date and time:*

Peso iniziale (g): 78,8311 — *Initial weight (g):*
Peso finale (g): 78,8306 — *Final weight (g):*
Perdita totale di peso (g): 0.0005 — *Weight total loss(g):*

Perdita di massa *g/m²* 0,1349
Specimen mass loss

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X
NOT PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata (cm²): (LxWx2)/100: 24,66
Examined area (cm²):

Media della profondità dei pit (µm): 0,00
Average of pits depth (µm):

No. Pit lato A(superficie): 0,00 — *Nr. Pit side A (surface):*
No. Pit lato B: 0,00 — *Nr. Pit side B:*
Pit per cm²: 0.00

Massima profondità dei pit (µm): 0,00
Maximum pit depth (µm):

Limite perdita di massa g/m² max.: 4,000
Limit Specimen mass loss max.

Esito delle prove / *Conclusion:* Conforme a 'Specifica' / Compliant with 'Specification'

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UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale / *Date of Material Arrival*	Data Rapporto di prova / *Test Report Date*	Ispettore / *Inspector*	Ispettore / *Inspector*	Responsabile di Reparto / *Department Manager*	Responsabile Laboratorio / *Laboratory Manager*
08/06/2012	**19/06/2012**	Witness *Customer*	Review *Customer*	***Stefano Antonielli***	***Paolo Amani***

ROSETTI MARINO Supply Management Dept.

firmato elettronicamente - electronically signed

R_Rpt_G48ACE_A_BIS dt. 13/03/2012

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raccortubi Heat num. or Pos. marking: 1101SA02 - Qty:1,00
Customer: ROSETTI MARINO S.p.A.
Description: TEE RID. 4"x1.1/2" SCH.10S/40S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 530 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020 10
Protocol: CTCERC2024000046 95 * CERTIFIED TRUE COPY
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RAPPORTO DI PROVA
TEST REPORT
E562 10076 / 12 Page 1 of 1
S.I.M. No.: 2789 / 12 F.C.P. No.: 2789 / 12 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**				Ordine *Order*	**OS000097 S**			Commessa *Job*	**120/12 12/1293**
Subcliente/Subcustomer /									
Descrizione *Description*	**RED. TEES 4" x 1.1/2" SCH. 10S / 40S**	Quantità *Quantity*	**110**	Posizione *Item*	**1**	Prova Nr. *Test. Nr.*	**981/12**	Colata *Heat*	**45292**	Materiale *Material*	**ASTM A 815-10a UNS S32760**

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti ***Determining volume fraction by systematic manual point count*** **Specifica:** ***Specification:*** **RTX_D53 Rev.4 + STATOIL -2010080 Rev.0**

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Direzione e Posizione *Location*			Note *Remarks*	Data esecuzione *Date of Testing*
981/12	45181	ASTM E562-11	B	T	FT		18/06/2012

FORMULE USATE
(Formulas used)

Percentuale media di punti (Pp): $Pp = 1/n \times \sum_{i=1}^{n} Pp(i)$
Average Percentage of Points (Pp):

Deviazione Standard (s): $s = \left[\frac{1}{n-1} \sum_{i=1}^{n} (Pp(i) - Pp)^2 \right]^{1/2}$
Standard Deviation (s):

95% Intervallo di scarto (95% CI): $95\%CI = \frac{2.0 \times s}{(n-1)^{1/2}}$
95% Confidence Interval (95%CI):

Errore (%): $\frac{95\%CI \times 100}{Pp}$
Error (%):

Frazione di Volume (Vv%): $Vv = Pp \pm 95\%CI$
Volume Fraction (Vv %):

RISULTATI (Min. 40%, Max. 55%)
Results (Min. 40%, Max. 55%)

Vv (% Frazione di volume della Ferrite) *Vv (% Volume fraction of the constituent):*	46,80 ± 1,57
% Errore (RA): *% Error (RA):*	3,35
Nr. di campi per provino/sezione/spaziatura/angolo: *Nr. of fields for specimens/section/spacing/angle:*	30 / 10 x 20 mm / 1 x 3 mm / 45°
Preparazione del provino: *Sample preparation:*	NaOH + Electrolytic
Ingrandimento: *Magnification:*	400 X
Misura del reticolo: *Grid size:*	40 mm x 40 mm 5 x 5 = 25 Points

% Frazione di volume della Ferrite per ciascun campo esaminato
% Volume fraction of the costituent for each metallographic section

1	42
2	42
3	46
4	50
5	54
6	50
7	48
8	50
9	42
10	42
11	52
12	44
13	46
14	46
15	54
16	48
17	44
18	42
19	54
20	52
21	44
22	52
23	42
24	42
25	44
26	50
27	46
28	50
29	42
30	44

Esito delle prove / *Conclusion:* **Conforme a 'Specifica' / Compliant with 'Specification'**

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente *a) We declare that this test report refers only to the examined sample supplied by the Customer.*
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Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*	Ispettore *Inspector*	Ispettore *Inspector*	Cliente *Customer*	Cliente *Customer*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
08/06/2012	**19/06/2012**			☐ Witness	☒ Review	***Stefano Antonielli***	***Paolo Amani***

ROSETTI MARINO Supply Management Dept.

firmato elettronicamente - electronically signed

R_Rpt_E562_A_BIS dt. 13/03/2012

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pcs. marking: 1101SA02 - Qty:1,00
Customer: ROSETTI MARINO S.p.A.
Description: TEE RID. 4"x1.1/2" SCH.10S/40S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 530 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

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RAPPORTO DI PROVA
TEST REPORT
A923A 10076 / 12 Page 1 of 1
S.I.M. No.: 2789 / 12 F.C.P. No.: 2789 / 12 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**					Ordine *Order*	**OS000097 S**		Commessa *Job*	**120/12 12/1293**
Subcliente/Subcustomer /									
Descrizione *Description*	**RED. TEES 4" x 1.1/2" SCH. 10S / 40S**	Quantità *Quantity*	**110**	Posizione *Item*	**1**	Prova Nr. *Test. Nr.*	**981/12**	Colata *Heat*	**45292**	Materiale *Material*	**ASTM A 815-10a UNS S32760**

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio **Specifica** ***Specification:*** **RTX_D53 Rev.4 + STATOIL -2010080 Rev.0**
Detecting Detrimental Intermetallic Phase: Sodium Hydroxide Etch Test

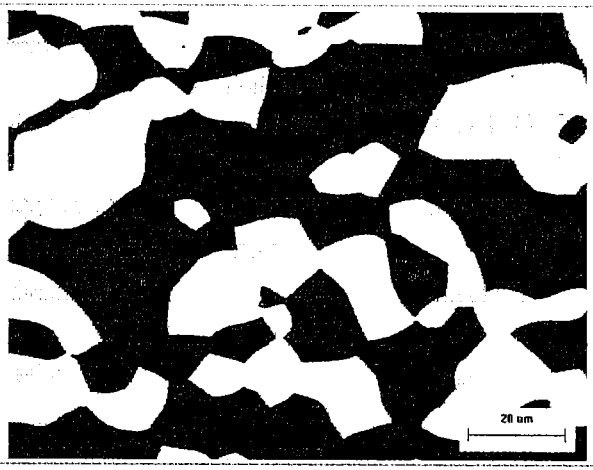
No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Direzione e Posizione *Location*			Temp. *Temp. (°C)*	Data esecuzione *Date of Testing*
981/12	45187	ASTM A923-08 (Met. A)	B	T	FT	20	18/06/2012

Attacco: *Etching:* NaOH + Electrolytic

Ingrandimento: *Enlargement:* 500 X

Area esaminata: *Area examined:* Materiale base / Base Material

Scala 1.5 : 1



Note: Classificazione struttura attaccata: Struttura inalterata. / Classification of etch structure: Unaffected structure.
Remarks:

Esito delle prove / *Conclusion:* Non applicabile / Not applicable

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Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*	Ispettore *Inspector*	Ispettore *Inspector*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
08/06/2012	**19/06/2012**			***Stefano Antonielli***	***Paolo Amani***

ROSETTI MARINO Customer Supply Management Dept
Witness Review
firmato elettronicamente - electronically signed

R_Rpt_A923A_A_BIS dt. 13/03/2012

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raccortubi Heat num. or Pcs. marking: 1101SA02 - Qty:1.00
Description: TEE RID. 4"x1.1/2" SCH.10S/40S SEAMLESS
Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 530 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020 10
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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TEST REPORT
A923C 10076 / 12 Page 1 of 1
S.I.M. No.: 2789 / 12 F.C.P. No.: 2789 / 12 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **Tecninox Srl Via Don Spagnoli. 5 29010 Sarmato PC**				Ordine *Order*	**OS000097 S**			Commessa *Job*	**120/12 12/1293**
Subcliente/Subcustomer /									
Descrizione *Description*	**RED. TEES 4" x 1.1/2" SCH. 10S / 40S**	Quantità *Quantity*	**110**	Posizione *Item*	**1**	Prova Nr. *Test. Nr.*	**981/12**	Colata *Heat*	**45292**	Materiale *Material*	**ASTM A 815-10a UNS S32760**

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

Individuazione di fasi intermetalliche dannose: Prova di corrosione per "pitting" in cloruro ferrico **Specifica:** ***Specification:*** **RTX_D53 Rev.4**
Detecting Detrimental Intermetallic Phase: Ferric Chloride Pitting Corrosion Test

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Direzione e Posizione *Location*	Note *Remarks*
981/12	45186	ASTM A923-08 (Met. C)	B L FT	

Dimensioni / *Dimensions*

Lunghezza (mm): 51,0 *Length (mm):*
Larghezza (mm): 23,5 *Width (mm):*
Spessore (mm): 9.4 *Thickness (mm):*
Area (cm²): 37.98 *Area (cm²):*

Provino in Materiale Base
Specimen in Base Material

Preparazione provino: *Specimen preparation:* Meccanica ☑ *Mechanical* Chimica ☐ *Chemical*
Temperatura di prova (°C): *Specimen preparation (°C):* 40
Tempo esposizione (ore): *Specimen preparation (hours):* 24
Soluzione: *Solution:* FeCl3 · 6H2O 10% water solution

Peso iniziale (g): *Initial weight (g):* 88,7119
Peso finale (g): *Final weight (g):* 88,7119
Perdita di peso (g): *Weight loss (g):* 0,0000
Perdita della massa (g/m²): *Specimen mass loss* 0,000
Velocità di corrosione (mg/(dm²*d)) *Corrosion rate (mg/(dm²*d)):* 0,0
Data inizio: *Initial date* 14/06/2012 16.30.00 Data fine: *End date* 15/06/2012 16.30.00
Limite velocità di corrosione (mg/(dm²*d)) max.: 10,0
Corrosion rate limit (mg/(dm²*d)) max.

Esito delle prove / *Conclusion:* Conforme a 'Specifica' / Compliant with 'Specification'

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente *a) We declare that this test report refers only to the examined sample supplied by the Customer.*
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Legenda / Legend:
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UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*	Ispettore *Inspector*	Ispettore *Inspector*	Note *Customer*	Note *Customer*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
08/06/2012	**19/06/2012**			ROSETTI MARINO *Supply Management Dept.* ☐ Witness ☑ Review		***Stefano Antonielli*** *firmato elettronicamente - electronically signed*	***Paolo Amani*** *firmato elettronicamente - electronically signed*

R_Rpt_A923C_A_BIS dt. 13/03/2012

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raccortubi Heat num. or Pcs. marking: 1101SA02 - Qty:1,00

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 4"x1.1/2" SCH.10S/40S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 530 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

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RAPPORTO DI PROVA
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ANL 10076 / 12 Page 1 of 1
S.I.M. No.: 2789 / 12 F.C.P. No.: 2789 / 12 A / A

Sede legale ed amministrativa:
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Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**				Ordine *Order*	**OS000097 S**			Commessa *Job*	**120/12 12/1293**
Subcliente/Subcustomer /									
Descrizione *Description* **RED. TEES 4" x 1.1/2" SCH. 10S / 40S**	Quantità *Quantity* **110**	Posizione *Item* **1**	Prova Nr. *Test. Nr.* **981/12**	Colata *Heat* **45292**	Materiale *Material* **ASTM A 815-10a UNS S32760**				

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

ANALISI SPETTROMETRICA AD EMISSIONE ATOMICA SOTTOVUOTO ***Atomic emission vacuum Spectrometric analysis*** **Specifica:** ***Specification:*** **RTX_D53 Rev.4**

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Direzione e Posizione *Location*	Temp. *Temp. (°C)*	Note *Remarks*	Data esecuzione *Date of Testing*
981/12	45188	ASTM E1086-08	B UP	20		18/06/12

C %	0,019	*Al %*		*Zr %*		**FORMULE**	***FORMULAS***
Si %	0,503	*Co %*		*Zn %*			
Mn %	0,686	*Nb %*		*O %*			
P %	0,022	*Ti %*		*Fe %*			
S %	0,004	*W %*	0,542	*Ca %*			
Cr %	25,437	*Pb %*		*Ta %*			
V %		*Sn %*		*Sb %*			
Mo %	3,555	*As %*				***PREN***	**41,50**
Ni %	7,05	*B %*					
Cu %	0,62	*N %*	0,271				

ID Gruppo / *Group ID:*

Esito delle prove / ***Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente *a) We declare that this test report refers only to the examined sample supplied by the Customer.*
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta *b) We declare that this test report cannot be partially reproduced without our written approval.*
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. *c) Compliance with documents in "Specification" refers only to the tests described on this test report.*

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/a (Depth Ratio)

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*	Ispettore *Inspector*	Ispettore *Inspector*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
08/06/2012	**19/06/2012**			***Stefano Antonielli***	***Paolo Amani***

ROSETTI MARINO Customer Supply Management Dept. Witness Review

firmato elettronicamente - electronically signed

R_Rpt_ANL_A_BIS dt. 13/03/2012

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pos. marking: 1101SA02 - Qty:1,00
Description: TEE RID. 4"x1.1/2" SCH.10S/40S SEAMLESS
Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 530 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O
Protocol: CTCERC20240004695 * CERTIFIED TRUE COPY
* Issued 20-05-2024

SIDER TEST S.r.l
Laboratorio Prove e Collaudi Controlli Non Distruttivi
Mechanical and Chemical Laboratory Non Destructive Tests
Sede legale ed amministrativa:
Strada della Barianella, 1/B - I-29015 Castel San Giovanni
Tel.+39 0523 881.900 Fax. +39 0523 842.903
http://www.sidertest.it sidertest@sidertest.it

RAPPORTO DI PROVA
TEST REPORT
DUR1 10076 / 12 Page 1 of 1
S.I.M. No.: 2789 / 12 F.C.P. No.: 2789 / 12 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer	**Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**				Ordine *Order*	**OS000097 S**		Commessa *Job*	**120/12 12/1293**
Subcliente/Subcustomer	/								
Descrizione *Description*	**RED. TEES 4" x 1.1/2" SCH. 10S / 40S**	Quantità *Quantity*	**110**	Posizione *Item*	**1**	Prova Nr. *Test. Nr.*	**981/12**	Colata *Heat*	**45292**	Materiale *Material*	**ASTM A 815-10a UNS S32760**

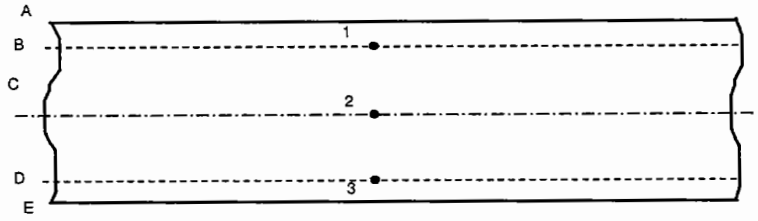
Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

PROVA DI DUREZZA HBW (Strumento di ***HBW hardness test (Indentation meas*** **Specifica:** ***Specification:*** **RTX_D53 Rev.4**

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Posizione di prelievo *Test position*		Durezza *Hardness*	Note *Note*	Data esecuzione *Date of Testing*
981/12	45180	ASTM E10-10	B	T	HB 2,5/187,5		15/06/2012

Minimo richiesto Rich. Ord. *Min. Request Ord. Reqs* ☐

Massimo richiesto Rich. Ord. *Max. Request Ord. Reqs* **270** ☐



AB=DE= 3 mm AC= 1/2 AE

Valori ottenuti / *Hardness Numbers*

1	*2*	*3*
261	**266**	**260**

Esito delle prove / *Conclusion:* **Conforme a 'Specifica' / Compliant with 'Specification'**

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente *a) We declare that this test report refers only to the examined sample supplied by the Customer.*
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta *b) We declare that this test report cannot be partially reproduced without our written approval.*
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. *c) Compliance with documents in "Specification" refers only to the tests described on this test report.*

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*	Ispettore *Inspector*	Ispettore *Inspector*	Cliente *Customer*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
08/06/2012	**19/06/2012**			ROSETTI MARINO Supply Management Dept. ☐ Witness ☒ Review	***Marco Borile***	***Paolo Amani***
					firmato elettronicamente - electronically signed	

R_Rpt_DUR1_A_BIS dt. 13/03/2012

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

PTD 204334,JALAN PLATINUM UTAMA,

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZONE 12B, 81700 PASIR GUDANG

JOHOR DARUL TAKZIM, MALAYSIA

Tel: +607-2518888 Fax: +607-2519999 Website: www.pantechssalloy.com

http:// www.pantech-group.com

NSF Certified to NSF/ANSI 61 — LRQA CERTIFIED ISO 9001 Approval No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO. : 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Raccortubi S.p.A

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-47111

Date : 2 Oct 2023

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
00005390	E000005892	ASTM A403/A403M - 22 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 23 / ASME SA 960/SA960M - 21 / ASME SECTION II PART A-2021	Solution Treated, Pickled-Passivated

Heat No.	Product & Size	Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
LN011-1	6" X 4" SCH 10s REDUCING TEE	25	WP316/316L-S	PASSED	NY220903AV08

Specification	Chemical Composition (%)										Tensile Test *1			Hardness	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS (KSI / MPa)	TS (KSI / MPa)	E (%)	(HRB)	
Max															
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-		-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
LN011-1	0.015	0.34	0.88	0.033	0.001	16.52	10.01	2.09	< 0.01		240	545	60	65	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER;

AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-22 STANDARD, SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE. LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-15 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT

Pantech Stainless & Alloy Industries Sdn. Bhd.
200601013677 (733428-W)
PTD 204334, Jalan Platinum Utama,
Kawasan Perindustrian Pasir Gudang, Zon 12B,
81700 Pasir Gudang, Johor.
Tel: +607-251 8888 Fax: +607-251 9999

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. QAQC MANAGER HASSANUDDIN

Head of Quality Assurance Department

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

Form :FQA-030b R.6; 04-03-2022

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 540 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: TEE RID. 6"x4" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: LN011-1 - Qty:6,00

Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

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NSF Certified to NSF/ANSI 61

LRQA CERTIFIED ISO 9001 Approval No.: ISO9001-0047485

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO.: 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Raccortubi S.p.A

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-47169

Date : 2 Oct 2023

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
00000210 S	E000005910	ASTM A403/A403M - 22 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 23 / ASME SA 960/SA960M - 21 / ASME SECTION II PART A-2021	Solution Treated, Pickled-Passivated

Heat No.	Product & Size	Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
MN034-1	4" X 3" SCH 10s REDUCING TEE	3	WP316/316L-S	PASSED	NY220918AT17
MN036-1	4" X 3" SCH 10s REDUCING TEE	22	WP316/316L-S	PASSED	NY221009AT08

Specification	Chemical Composition (%)										Tensile Test *1			Hardness	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS	TS	E		
Max / Min / Heat No.											(KSI / MPa)		(%)	(HRB)	
Min	0.030	1.00	2.00	0.045	0.030	16.00	14.00	3.00	-		-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
MN034-1	0.013	0.43	0.98	0.032	0.001	16.46	10.01	2.07	< 0.01		242	578	58	66	PASSED
MN036-1	0.013	0.39	1.02	0.032	0.001	16.35	10.09	2.07	< 0.01		246	564	60	76	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER, AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-22 STANDARD. SPECIMEN GAUGE WIDTH 19.2MM. FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE. LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-15 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT

Pantech Stainless & Alloy Industries Sdn. Bhd.
200601013677 (733428-W)
PTD 204334, Jalan Platinum Utama,
Kawasan Perindustrian Pasir Gudang, Zon 12B,
81700 Pasir Gudang, Johor.
Tel: +607-251 8888 Fax: +607-251 9999

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. QAQC MANAGER HASSANUDDIN

Head of Quality Assurance Department

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Form :FQA-030b R.6; 04-03-2022

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 550 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: TEE RID. 4"x3" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: MN036-1 - Qty:6,00

Protocol: CTCERC202400004695 * CERTIFIED COPY * Issued 20-05-2024

Customer:
Description: TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS
Heat num. or Pcs. marking: 12B258 - Qty:5.00
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024
ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 610 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

CTCERT20230000004338.1.0001

良豐不銹鋼管件有限公司
LIANG FENG STAINLESS STEEL FITTING CO., LTD.

高雄市路竹區中山南路74號
NO. 74, Zhongshan S. Rd., Luzhu District, Kaohsiung City 821, Taiwan R.O.C.
TEL : 886-7-6970588 FAX : 886-7-6970599

ISO-9001 LRQA
Certificate No.: 10303342
PED 2014/68/EU
Approval Certificate No.:00014950

JIS B2313
Certificate No.: JWTW 13002
JIS B2309
Certificate No.: JWTW 13001

EN10204-3.1

本證書請妥善保存遺失恕不補發
Please keep this certificate properly.
If it is lost, it will not be reissued.

客戶 PURCHASER: Raccortubi S.p.A.
規範 PRODUCT SPEC.: ASTM A403/403M-22 ASME SA403-21
原料 RAW MATERIAL: ASTM A312-2019/ASME SA312-2021
檢驗規範 INSP. SPEC.: ASME B16.9-18

頁次 PAGE: 1
日期 DATE: 2023/6/13
證書號碼 CERTIFI. NO.: 23060561

檢驗證明書
INSPECTION CERTIFICATE

ITEM NO. 項次	PRODUCT & SIZE 產品品名&尺寸	QUANTITY PCS 數量	MATERIAL HEAT NO. 爐號	MANUFACTURING NO. 製造工令	CUSTOMER'S ORDER NO. 客戶訂單號碼	P. I. N.O. 銷貨編號	REMARKS 備註
41	R TEE 1-1/2" X 3/4" SCH40S WP316/316L-S	25	12B258	23040006	00000083 S	23060277	cold formed,seamless execution

ITEM NO. 項次	SPECIFICATION 說明		CHEMICAL COMPOSITION % 化學成份 C碳	Si矽	Mn錳	P磷	S硫	Cu銅	Ni鎳	Cr鉻	Mo鉬	V釩	Nb鈮	PHYSICAL 物理性質 YS 降伏點 Mpa	TS 抗拉強度 Mpa	E 延伸率 %	HARD,HRB 硬度
	STANDARD	MIN.							10.00	16.00	2.00			170	485	28	
		MAX.	0.030	1.00	2.00	0.045	0.030		14.00	18.00	3.00			0	0	0	
41			0.022	0.38	1.39	0.034	0.001		10.04	16.15	2.09			295	595	59	88.47

HEAT TREATMENT 熱處理 1060°C ±10° W.Q.	DIMENTIONAL INSPECTION 尺寸檢查	VISUAL INSPECTION 外觀檢查	NONDESTRUCTIVE EXAMINATION (PT. UT. RT.) 非破壞檢測
Solution Annealing, Good	GOOD	GOOD	

WE HEREBY CERTIFIED THAT THE ABOVE MATERIAL HAD BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND WAS FOUND TO MEET THE REQUIREMENTS OF ABOVE SPECIFICATIONS AND PURCHASER'S ORDER.
茲證明上述材料按照規範進行製造，取樣，檢測和檢驗，符合上述規範和採購訂單的要求。

備註： 1. 100% P.M.I.: Satisfactory. 2. Material conforms to NACE MR0175/ISO 15156(2021) & MR0103(2015). 3. Corrosion test acc. ASTM A262 Practice E: Satisfactory. 4. Fittings in pickled and passivated condition. 5. Heat Treatment soaking time 25~28min, and rapidly cold with water. 6. No Russian materials were used during the whole production cycle.

良豐不銹鋼管件有限公司 品檢專用章 Quality Inspection Stamp Liang Feng Stainless Steel Fitting Co.

歐勁軒
MANAGER OF Q. A. DEPT. 品管課經理

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

363/996

Customer: ROSETTI MARINO S.p.A.
Description: CURVE 45° LR 3/4" SCH.40/S SEAMLESS
raccortubi Heat num. or Pos. marking: LD230511-04 - Qty:5,00
Order: 1724000839 - 22.04.24 - Item n.: 630 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004695 * CERTIFIED TRUE COPY * Issued 20-05-2024
CTCERT202400000351.1.0001

良豐不銹鋼管件有限公司
LIANG FENG STAINLESS STEEL FITTING CO., LTD.
高雄市路竹區中山南路74號
NO. 74, Zhongshan S. Rd., Luzhu District, Kaohsiung City 821, Taiwan R.O.C.
TEL: 886-7-6970588 FAX: 886-7-6970599

ISO-9001 LRQA Certificate No.: 10303342
PED 2014/68/EU Approval Certificate No.:00014950
JIS B2313 Certificate No.: JWTW 13002
JIS B2309 Certificate No.: JWTW 13001

客戶 PURCHASER: Raccortubi S.p.A.
規範 PRODUCT SPEC.: ASTM A403/403M-22 ASME SA403-21
原料 RAW MATERIAL: ASTM A312-2019/ASME SA312-2021
檢驗規範 INSP. SPEC.: ASME B16.9-18

檢驗證明書
INSPECTION CERTIFICATE

EN10204-3.1

本證書請妥善保存遺失恕不補發
Please keep this certificate properly. If it is lost, it will not be reissued.

頁次 PAGE: 1
日期 DATE: 2023/9/21
證書號碼 CERTIFI. NO.: 23090873

ITEM NO. 項次	PRODUCT & SIZE 產品品名&尺寸	QUANTITY PCS 數量	MATERIAL HEAT NO. 爐號	MANUFACTURING NO. 製造工令	CUSTOMER'S ORDER NO. 客户訂單號碼	P. I. N.O. 銷貨編號	REMARKS 備註
26	45 LR 3/4" SCH40S WP316/316L-S	20	LD230511-04	23070004	00000166 S	23090222	cold formed,seamless execution

ITEM NO. 項次	SPECIFICATION 說明		CHEMICAL COMPOSITION % 化學成份											PHYSICAL 物理性質			
			C碳	Si矽	Mn錳	P磷	S硫	Cu銅	Ni鎳	Cr鉻	Mo鉬	V釩	Nb鈮	YS 降伏點	TS 抗拉強度	E 延伸率	HARD, HRB 硬度
														Mpa	Mpa	%	
	STANDARD	MIN.							10.000	16.000	2.000			170	485	28	
		MAX.	0.030	1.000	2.000	0.045	0.030		14.000	18.000	3.000			0	0	0	
26			0.027	0.530	1.280	0.030	0.012	0	10.250	16.720	2.650			250	535	48	84.06

HEAT TREATMENT 熱處理	DIMENTIONAL INSPECTION 尺寸檢查	VISUAL INSPECTION 外觀檢查	NONDESTRUCTIVE EXAMINATION (PT. UT. RT.) 非破壞檢測
1060°C ±10° W.Q.			
Solution Annealing, Good	GOOD	GOOD	

WE HEREBY CERTIFIED THAT THE ABOVE MATERIAL HAD BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND WAS FOUND TO MEET THE REQUIREMENTS OF ABOVE SPECIFICATIONS AND PURCHASER'S ORDER.
茲證明上述材料按照規範進行製造，取樣，檢測和檢驗，符合上述規範和採購訂單的要求。

備註：
1. 100% P.M.I.: Satisfactory. 2. Material conforms to NACE MR0175/ISO 15156(2021) & MR0103(2015). 3. Corrosion test acc. ASTM A262 Practice E: Satisfactory. 4. Fittings in pickled and passivated condition. 5. Heat Treatment soaking time 25~28min, and rapidly cold with water.
6. No Russian materials were used during the whole production cycle.

良豐不銹鋼管件有限公司 品檢專用章 Quality Inspection Stamp Liang Feng Stainless Steel Fitting Co., Ltd.

MANAGER OF Q. A. DEPT.
品管課經理

ROSETTI MARINO
Supply Management Dept
Witness Review

S0152001-3*

S0152001-3*

Customer: ROSETTI MARINO S.p.A.
Description: RID. CONC. 3/4"x1/2" SCH.40/S SEAMLESS
raccortubi Heat num. or Pos. marking: LD230511-04 - Qty:1.00
Order: 1724000839 - 22.04.24 - Item n.: 650 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC2024000004695 * CERTIFIED TRUE COPY * Issued 20-05-2024
CTCERT2024000000356.1.0001

良豐不銹鋼管件有限公司
LIANG FENG STAINLESS STEEL FITTING CO., LTD.
高雄市路竹區中山南路74號
NO. 74, Zhongshan S. Rd., Luzhu District, Kaohsiung City 821, Taiwan R.O.C.
TEL : 886-7-6970588 FAX : 886-7-6970599

ISO-9001 LRQA Certificate No.: 10303342
PED 2014/68/EU Approval Certificate No.:00014950
JIS B2313 Certificate No.: JWTW 13002
JIS B2309 Certificate No.: JWTW 13001

客户 PURCHASER: Raccortubi S.p.A.
規範 PRODUCT SPEC.: ASTM A403/403M-22 ASME SA403-21
原料 RAW MATERIAL: ASTM A312-2019/ASME SA312-2021
檢驗規範 INSP. SPEC.: ASME B16.9-18

檢驗證明書
INSPECTION CERTIFICATE

EN10204-3.1

本證書請妥善保存遺失恕不補發
Please keep this certificate properly. If it is lost, it will not be reissued.

頁次 PAGE: 1
日期 DATE: 2023/9/21
證書號碼 CERTIFI. NO.: 23090884

ITEM NO. 項次	PRODUCT & SIZE 產品品名&尺寸	QUANTITY PCS 數量	MATERIAL HEAT NO. 爐號	MANUFACTURING NO. 製造工令	CUSTOMER'S ORDER NO. 客户訂單號碼	P. I. N.O. 銷貨編號	REMARKS 備註
36	CR 3/4" X 1/2" SCH40S WP316/316L-S	15	LD230511-04	23070004	00000166 S	23090223	cold formed,seamless execution

ITEM NO. 項次	SPECIFICATION 說明		CHEMICAL COMPOSITION % 化學成份 C碳	Si矽	Mn錳	P磷	S硫	Cu銅	Ni鎳	Cr鉻	Mo鉬	V釩	Nb鈮	PHYSICAL 物理性質 YS 降伏點	TS 抗拉強度	E 延伸率	HARD,HRB 硬度
														Mpa	Mpa	%	
	STANDARD	MIN.							10.000	16.000	2.000			170	485	28	
		MAX.	0.030	1.000	2.000	0.045	0.030		14.000	18.000	3.000			0	0	0	
36			0.027	0.530	1.280	0.030	0.012	0	10.250	16.720	2.650			250	535	48	84.06

HEAT TREATMENT 热處理 1060°C ±10° W.Q.	DIMENTIONAL INSPECTION 尺寸檢查	VISUAL INSPECTION 外觀檢查	NONDESTRUCTIVE EXAMINATION (PT. UT. RT.) 非破壞檢測
Solution Annealing, Good	GOOD	GOOD	

WE HEREBY CERTIFIED THAT THE ABOVE MATERIAL HAD BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND WAS FOUND TO MEET THE REQUIREMENTS OF ABOVE SPECIFICATIONS AND PURCHASER'S ORDER.
茲證明上述材料按照規範進行製造，取樣，檢測和檢驗，符合上述規範和採購訂單的要求。

備註： 1. 100% P.M.I.: Satisfactory. 2. Material conforms to NACE MR0175/ISO 15156(2021) & MR0103(2015). 3. Corrosion test acc. ASTM A262 Practice E: Satisfactory. 4. Fittings in pickled and passivated condition. 5. Heat Treatment soaking time 25~28min, and rapidly cold with water. 6. No Russian materials were used during the whole production cycle.

良豐不銹鋼管件有限公司 品檢專用章 Quality Inspection Stamp

MANAGER OF Q. A. DEPT.
品管課經理

ROSETTI MARINO
Quality Management Dept.

S0152001-3*

raccortubi

00004849

30/05/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
280	NR	40	0,00	CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS	M230941
360	NR	8	0,00	RID. CONC. 3"x1.1/2" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S	1074624
370	NR	3	0,00	RID. CONC. 2"x1" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S	1168624
400	NR	6	0,00	RID. CONC. 6"x4" SCH.40S/10S SEAMLESS ALESATE DA SCH.40/S	MO070-1
				RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
420	NR	2	0,00	RID. ECC. 4"x1.1/2" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S	1127SA03
				RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	

raccortubi

00004849

30/05/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

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Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
560	NR	10	0,00	TEE RID. 1"x3/4" SCH.40/S SEAMLESS	EF6171
560	NR	15	0,00	TEE RID. 1"x3/4" SCH.40/S SEAMLESS	1067621
580	NR	4	0,00	TEE RID. 2"x3/4" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S	221008AS16
590	NR	2	0,00	TEE RID. 2"x1" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S	N220713AT01
600	NR	2	0,00	TEE RID. 10"x6" SCH.10/S SEAMLESS	N180725AV11
600	NR	4	0,00	TEE RID. 10"x6" SCH.10/S SEAMLESS	EF1761
600	NR	1	0,00	TEE RID. 10"x6" SCH.10/S SEAMLESS	MN078-1
620	NR	6	0,00	TEE RID. 6"x4" SCH.40S/10S SEAMLESS	151863

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

ITALTEST NDT

CONTROLLI E COLLAUDI INDUSTRIALI
SETTIMO MILANESE – LEGNANO (MI) www.italtest.it

RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI

LIQUID PENETRANT TEST REPORT

50 dal 1965
CERT. ISO 9001 LRC0100763/QMS

N° 4.130 / 2024

PAGINA DI PAGINE
Page 1 of 2 Pages

CLIENTE Customer RACCORTUBI S.p.A.	ORDINE Order 1724000839 - 22.04.2024	COMMESSA Job 00002010

OGGETTO
Object SEE PAGE 2

SPECIFICA GENERALE General specification	PIANO DI CONTROLLO Control Plan	FASE Phase	CRITERIO D'ACCETTAZIONE Acceptance Standards
ASTM SE 165			ASME VIII DIV.1 APP.8

PROCEDURA Procedure	MATERIALE Material	DISEGNO FIG. Drawing Fig.	% CONTROLLATA Extent %
	SEE PAGE 2		100% SURFACE

CONDIZIONE SUPERFICE Surface Conditions	SALDATO As Welded	MOLATO Ground	LAVORATO Machined	FORGIATO As Forged X	FUSO As Cast

STATO DEL MATERIALE Material Status	PRIMA DEL T.T. Before Heat Treatment	DOPO T.T. After Heat Treatment	DOPO RIPARAZIONE After Repair

DATI DELLA PROVA
Test Data

METODO DI PULIZIA
Precleaning Method SOLVENT AND PAPER

TECNICA Technique	CONTRASTO DI COLORE Color Contrasting X	FLUORESCENTE Fluorescent
	ILLUMINAZIONE White Light Intensity 1200 lx	ILLUMINAZIONE Black Light Intensity

METODO DI ISPEZIONE Liquid Penetrant Inspection Method						
MARCA Brand N.D.T.			PENETRANTE Penetrant	SPRAY Spray X	LOTTO Batch 210115Ps	SCADENZA Expiry 02/2025
TIPO Type	LAVABILE IN ACQUA Water Washable X			PENNELLO Brush	LOTTO Batch	SCADENZA Expiry
	POST EMULSIONABILE Post Emulsifiable		RIVELATORE Developer	SECCO Dry	LOTTO Batch	SCADENZA Expiry
	RIMOVIBILE CON SOLVENTE Solvent Removable			UMIDO Wet X	LOTTO Batch 230206W150s	SCADENZA Expiry 01/2027

TEMPO DI PENETRAZIONE Dwell Time 20 MINUTE	METODO DI PULIZIA Cleaning Method WATER AND PAPER
TEMPO DI SVILUPPO Developing Time 10 MINUTE	METODO DI PULIZIA Cleaning Method WATER AND PAPER

RISULTATI DELLA PROVA
Test Results

SENZA DIFETTI No Defects X	DIFETTI ACCETTABILI Accettable Defects	DIFETTI NON ACCETTABILI Unaccepptable Defects

OSSERVAZIONI O DESCRIZIONE DELLE INDICAZIONI
Description Of Defects, Size And Location

RISULTATI Results	CONFORME ALLA SPECIFICA According To Specification X	NON CONFORME ALLA SPECIFICA Not According To Specification	SCARTO Scrap

NOTE
Notes

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT DATA Date 28 / 05 / 2024	ROSETTI MARINO Supply Management Dept. DATA ☐ Witness ☐ Review Date	DATA Date

ITALTEST NDT
CONTROLLI E COLLAUDI INDUSTRIALI
SETTIMO MILANESE – LEGNANO (MI) www.italtest.it

RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI
LIQUID PENETRANT TEST REPORT

dal 1965 — CERT. ISO 9001 LRC0100763/QMS

N° 4.130 / 2024

PAGINA DI PAGINE
Page 2 of 2 Pages

CLIENTE Customer	ORDINE Order	COMMESSA Job
RACCORTUBI S.p.A.	1724000839 - 22.04.2024	00002010

ITEM Item	Q.TÀ Q.ty	DESCRIZIONE Description	MATERIALE Material	COLATA Heat
280	40	ELBOWS 90° LR 1 ½" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	M230941
360	8	CONC. REDS. 3"x 1 ½" SCH.10S/40S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	1074624
370	3	CONC. REDS. 2"x 1" SCH.10S/40S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	1168624
400	6	CONC. REDS. 6"x 4" SCH.10S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	M0070-1
560	10	RED. TEES 1"x ¾" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	EF6171
560	15	RED. TEES 1"x ¾" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	1067621
580	4	RED. TEES 2"x ¾" SCH.10S/40S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	221008AS16
590	2	RED. TEES 2"x 1" SCH.10S/40S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	N220713AT01
600	4	RED. TEES 10"x 6" SCH.10S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	EF1761
600	1	RED. TEE 10"x 6" SCH.10S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	MN078-1
600	2	RED. TEES 10"x 6" SCH.10S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	N180725AV11
620	6	RED. TEES 6"x 4" SCH.40S/10S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	151863
-	-	-	-	-

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT	ROSETTI MARINO Supply Management Dept. ☐ Witness ☑ Review	
DATA Date 27 / 05 / 2024	DATA Date	DATA Date

ITALTEST NDT

CONTROLLI E COLLAUDI INDUSTRIALI
SETTIMO MILANESE – LEGNANO (MI) www.italtest.it

RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI

LIQUID PENETRANT TEST REPORT

dal 1965 — CERT. ISO 9001 LRC0100763/QMS

N° 4.131 / 2024

PAGINA DI PAGINE
Page 1 of 1 Pages

CLIENTE Customer	ORDINE Order	COMMESSA Job
RACCORTUBI S.p.A.	1724000839 - 22.04.2024	00002010

OGGETTO
Object: NR. 2 ECC. REDS. 4" x 1 ½" SCH.10S/40S SEAMLESS - ANSI B16.9/B16.25 – HEAT 1127SA03 – ITEM 420

SPECIFICA GENERALE General specification	PIANO DI CONTROLLO Control Plan	FASE Phase	CRITERIO D'ACCETTAZIONE Acceptance Standards
ASTM SE 165			ASME VIII DIV.1 APP.8

PROCEDURA Procedure	MATERIALE Material	DISEGNO Drawing	FIG. Fig.	% CONTROLLATA Extent %
	ASTM /ASME SA/A-815 UNS S32760			100% SURFACE

CONDIZIONE SUPERFICE Surface Conditions	SALDATO As Welded	MOLATO Ground	LAVORATO Machined	FORGIATO As Forged	FUSO As Cast
				X	

STATO DEL MATERIALE Material Status	PRIMA DEL T.T. Before Heat Treatment	DOPO T.T. After Heat Treatment	DOPO RIPARAZIONE After Repair

DATI DELLA PROVA
Test Data

METODO DI PULIZIA
Precleaning Method: SOLVENT AND PAPER

TECNICA Technique	CONTRASTO DI COLORE Color Contrasting	FLUORESCENTE Fluorescent
	X	
	ILLUMINAZIONE White Light Intensity: 1200 lx	ILLUMINAZIONE Black Light Intensity

METODO DI ISPEZIONE Liquid Penetrant Inspection Method						
MARCA Brand: N.D.T.			PENETRANTE Penetrant	SPRAY Spray: X	LOTTO Batch: 210115Ps	SCADENZA Expiry: 02/2025
TIPO Type	LAVABILE IN ACQUA Water Washable: X			PENNELLO Brush	LOTTO Batch	SCADENZA Expiry
	POST EMULSIONABILE Post Emulsifiable		RIVELATORE Developer	SECCO Dry	LOTTO Batch	SCADENZA Expiry
	RIMOVIBILE CON SOLVENTE Solvent Removable			UMIDO Wet: X	LOTTO Batch: 230206W150s	SCADENZA Expiry: 01/2027

TEMPO DI PENETRAZIONE Dwell Time	METODO DI PULIZIA Cleaning Method
20 MINUTE	WATER AND PAPER
TEMPO DI SVILUPPO Developing Time	**METODO DI PULIZIA Cleaning Method**
10 MINUTE	WATER AND PAPER

RISULTATI DELLA PROVA
Test Results

SENZA DIFETTI No Defects	DIFETTI ACCETTABILI Accettable Defects	DIFETTI NON ACCETTABILI Unaccepptable Defects
X		

OSSERVAZIONI O DESCRIZIONE DELLE INDICAZIONI
Description Of Defects, Size And Location

RISULTATI Results	CONFORME ALLA SPECIFICA According To Specification	NON CONFORME ALLA SPECIFICA Not According To Specification	SCARTO Scrap
	X		

NOTE
Notes

PROVA EFFETTUATA PRESSO
Test Carried Out At: WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 DATA Date: 28 / 05 / 2024 RT	ROSETTI MARINO Supply Management Dept. DATA Date ☐ Witness ☐ Review	DATA Date

Customer: ROSETTI MARINO S.p.A.

Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS

raccortubi Heat num. or Pos. marking: M230941 - Qty:32.00

Order: 1724000839 - 22.04.24 - Item n.: 280 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000010

Protocol: CTCERC2024000484 9 * CERTIFIED TRUE COPY * Issued 30-05-2024

CTCERT2024000034791.0001

Cert. to EN 10204 / 3.1

INSPECTION CERTIFICATE

S.P. UNITED INDUSTRY SDN. BHD.

(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Page (頁) : 1

Date (日付) : JANUARY 31, 2024

Certificate No. : 24-01-0127 (書類番号)

LRQA CERTIFIED ISO 9001

Approval No:ISO9001-0045006
PED Cert No:CE-48/PED/MUM/101005/1

Order No.: 23SAN007 (注文番号)

LA SOCIETE S.P. UNITED INDUSTRY SDN. BHD. GARANTIT QUE LES PRODUITS OBJET DU PRESENT CERTIFICAT, RESPECTENT EN LEUR TOTALITE LES PRESCRIPTIONS DE L'ARTICLE 15 DE L'ARRETE MINISTERIEL DU 24 MARS 1978, MODIFIE.
C ≤ 0,25%, P ≤ 0,05%, S ≤ 0.05%, R ≤ 800 N/MM², E ≤ 0,9 X R%,
A%(LO=5,65√SO) MIN. 16%, EN LONG, R(A-2) ≥10500 N/MM²

P.O. No. : 806739

Product (形状)	Product Specification (規格)	Specification for Raw Material (材料規格)
STAINLESS STEEL 90 DEG LONG RADIUS ELBOW (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 (ASME SEC II PART A) ASME B16.9-2018 / MSS SP-43-2019 WP-S 316/316L	ASTM A312 TP 316/316L

	*	Size (寸法)	Dimension in mm (寸法) Outside Dia (外径)	Thickness (厚さ)	Lot No. (製造番号)	Quantity (数量)	Surface Inspection (外観検査)	Dimension Inspection (寸法検査)	S. P. I. Code No.	Manufacturing Method
X	1	FBBLR-S316L- 1½"x40S	48.26	3.68	M230941	300	GOOD	GOOD	24341500	COLD FORMED
	2	FBBLR-S316L- 2"x40S	60.33	3.91	M230884	196	GOOD	GOOD	24342000	COLD FORMED
	3	FBBLR-S316L- 2"x40S	60.33	3.91	M230809	4	GOOD	GOOD	24342000	COLD FORMED

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

Chemical Composition of Raw Material % (化学成分) (材料) / Mechanical Properties of Raw Material (機械的性質)

*	Raw Pipe Heat No. (溶解番号)	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100		Type of Specimen (試験片)	YS Mpa (耐力)	TS Mpa (引張強さ)	EL% (伸び) (GL:50mm)	EL% (伸び) Standard (規格値)	Flattening Test (へん平試験)	HT Mpa (水圧試験)	Hardness Test HRB	
1	NY230828AW12	2.0	33.2	101	35	1	1002	1642	202			259	599	55		GOOD	GOOD	79	
2	NY230828AW12	2.0	33.2	101	35	1	1002	1642	202			257	596	55		GOOD	GOOD	78	
3	230628AS08	1.9	45.1	89	34	1	1001	1649	201			254	594	56.5		GOOD	GOOD	79	
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300			MIN 205	MIN 515	MIN 28					

Remarks * Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, NACE MR0103:2015
ISO 9001:2015/EN 10204-3.1, PED 2014/68/EU ANNEX I SECTION 4.3 INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD.
HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER. PICKLED AND PASSIVATED.
NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION
We certify that the above material has been inspected and tested and complies with the order/contract. This Material (BW Fittings. HS Code 730723), is produced by S.P. United Industry SDN BHD.
Material here certified does not contain any steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No COUNCIL REGULATION (EU) 2023/1214 of 23 June 2023 and amending Regulation (EU) No 833/2014

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.
(上記の製品は、当該規格及び、で注文の要求事項に適合するてとを証明します。)

ROSETTI MARINO
Suoply Management Dept.
☐ Witness ☑ Review

Head of QA/QC Dept.
質量/品質管理課長

raccortubi Heat num. or Pos. marking: M230941 - Qty:8,00
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS
Order: 1724000839 - 22.04.24 - Item n.: 280 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010
Protocol: CTCERC2024000004849 * CERTIFIED TRUE COPY
* Issued 30-05-2024
CTCERT2024000003479.1.0001

Cert. to EN 10204 / 3.1

INSPECTION CERTIFICATE

S.P. UNITED INDUSTRY SDN. BHD.

(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Page (頁) : 1

Date (日付) : JANUARY 31, 2024

Certificate No. : 24-01-0127
(書類番号)

LRQA CERTIFIED ISO 9001
Approval No:ISO9001-0045008
PED Cert No:CE-48/PED/MUNK/101003/1

Order No. : 23SAN007
(注文番号)

LA SOCIETE S.P. UNITED INDUSTRY SDN. BHD. GARANTIT QUE LES PRODUITS OBJET DU PRESENT CERTIFICAT, RESPECTENT EN LEUR TOTALITE LES PRESCRIPTIONS DE L'ARTICLE 15 DE L'ARRETE MINISTERIEL DU 24 MARS 1978, MODIFIE.
C ≤ 0.25%, P ≤ 0.05%, S ≤ 0.05%, R ≤ 800 N/MM², E ≤ 0.9 X R%,
A%(LO=5.65√SO) MIN. 16%, EN LONG, R(A-2) ≥10500 N/MM²

P.O. No. : 806739

Product (形状)	Product Specification (規格)	Specification for Raw Material (材料規格)
STAINLESS STEEL 90 DEG LONG RADIUS ELBOW (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 (ASME SEC II PART A) ASME B16.9-2018 / MSS SP-43-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*		Size (寸法)	Dimension in mm (寸法) Outside Dia (外径)	Thickness (厚さ)	Lot No. (製造番号)	Quantity (数量)	Surface Inspection (外観検査)	Dimension Inspection (寸法検査)	S. P. I. Code No.	Manufacturing Method
X	1	FBBLR-S316L- 1½"x40S	48.26	3.68	M230941	300	GOOD	GOOD	24341500	COLD FORMED
	2	FBBLR-S316L- 2"x40S	60.33	3.91	M230884	196	GOOD	GOOD	24342000	COLD FORMED
	3	FBBLR-S316L- 2"x40S	60.33	3.91	M230809	4	GOOD	GOOD	24342000	COLD FORMED

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

Chemical Composition of Raw Material % (化学成分) (材料)

*	Raw Pipe Heat No. (溶解番号)	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100	
1	NY230828AW12	2.0	33.2	101	35	1	1002	1642	202	
2	NY230828AW12	2.0	33.2	101	35	1	1002	1642	202	
3	230628AS08	1.9	45.1	89	34	1	1001	1649	201	
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300	

Mechanical Properties of Raw Material (機械的性質)

Type of Specimen (試験片)	YS Mpa (耐力)	TS Mpa (引張強さ)	EL% (伸び) (GL:50mm)	EL% (伸び) Standard (規格値)	Flattening Test (へん平試験)	HT Mpa (水圧試験)	Hardness Test HRB	
	259	599	55		GOOD	GOOD	79	
	257	596	55		GOOD	GOOD	78	
	254	594	56.5		GOOD	GOOD	79	
	MIN 205	MIN 515	MIN 28					

Remarks * Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, NACE MR0103:2015
ISO 9001-2015/EN 10204-3.1, PED 2014/68/EU ANNEX I SECTION 4.3 INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD.
HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER. PICKLED AND PASSIVATED.
NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION
We certify that the above material has been inspected and tested and complies with the order/contract. This Material (BW Fittings. HS Code 730723), is produced by S.P. United Industry SDN BHD.
Material here certified does not contain any steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No COUNCIL REGULATION (EU) 2023/1214 of 23 June 2023 and amending Regulation (EU) No 833/2014

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.
(上記の製品は、当該規格及び、で注文の要求事項に適合するてとを証明します。)

Head of QA/QC Dept.
質量/品質管理課長

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

raccortubi Heat num. or Pos. marking: 1074624 - Qty:8,00

Description: RID. CONC. 3"x1.1/2" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 360 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010

Protocol: CTCERC20240000484 9 * CERTIFIED TRUE COPY * Issued 30-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5
29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente Customer: RACCORTUBI S.p.A.

Ordine N. P.O.N./C.: Master plan Febbraio 2024/1

Pos. N. Item/Poste: 36 — **Q.tà** Q.ty/Q.té: 128

(*) Marcatura e cert. N. Material Marking e Cert. N.: 1074624

Created on: 23-02-2024

Descrizione Description: CONC.REDS 3"x1.1/2" SCH.40/S SEAMLESS

Specifica Specification: FITTINGS TO ASME II Part.A SA403/403M Ed.2023
ASTM A403/403M-22b WP 316/316L
DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: MANNESMANN STAINLESS TUBES Cert. No.: 3-23-03546-rev.01
Raw material - manufacturer/Materiel du depart - fabriquant:
MANNESMANN STAINLESS TUBES Cert. No.: 3-23-03546-rev.01

Specifica Specification/Specification	Caratteristiche meccaniche Mechanical Properties/Caracteristiques Mechaniques							
	Colata N. Heat N. Couléé N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
SMLS PIPES TO ASME/ASTM SA/A 312TP 316/316L, DIMS TO ANSI B36.19	376396	QL30179468	241	565	56	HRC<22	HRC 7	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Couléé N.	C	Si	Mn	P	S	Cr	Ni	Mo	N	Co				PRE	FERRITE
376396	0,017	0,43	1,59	0,022	0,0010	16,8	11,2	2,0	0,07	0,17					

Prove
Tests/Tests

Prova di corrosione A262 Prat. E: Conforme
Corrosion Test A262 Pract. E: In conformity
Essais de corrosion A262 Prat. E: En Conformité

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/EU annex I para 4.3

Materials comply with MESC 76/110 & 76/202.

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS ACC. TO ASTM A380
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication
Formato a freddo Cold formed Formés à froid — **Senza saldatura** Seamless Sans soudure

Ispezione
Inspection/inspéction
Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1045°C

Solution Annealing at 1045°C , water quenching

Hypertrempés à 1045°C

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur
ROSETTI MARINO
Supply Management Dept.

☐ Witness ☒ Review 6/3/2096

raccortubi Heat num. or Pcs. marking: 1168624 - Qty:3,00

Description: RID. CONC. 2"x1" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 370 - Project: 123A80A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O

Protocol: CTCERC20240004849 * CERTIFIED TRUE COPY * Issued 30-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5
29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente RACCORTUBI S.p.A.
Customer

Ordine N. Master plan Aprile 2024/1
P.O.N./C.

Pos. N. 9 **Q.tà** 214
Item/Poste Q.ty/Q.té

(*) Marcatura e cert. N. 1168624
Material Marking e Cert. N.

Created on: 03-05-2024

Descrizione CONC.REDS 2"x1" SCH.40/S SEAMLESS
Description
Description

Specifica FITTINGS TO ASME II Part.A SA403/403M Ed.2023
Specification ASTM A403/403M-22b WP 316/316L
Spécification DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: ALLEIMA Cert. No.: A/23-173128 Rev 00
Raw material - manufacturer/Materiel du depart - fabriquant:
ALLEIMA Cert. No.: A/23-173128 Rev 00

Specifica Specification/Specification	Caratteristiche meccaniche Mechanical Properties/Caracteristiques Mechaniques							
	Colata N. Heat N. Couléè N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
SMLS PIPES TO ASME/ASTM SA/A 312TP 316/316L, DIMS TO ANSI B36.19	569195	16020	278	607	52	HRC<22	HRC 8	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Couléè N.	C	Si	Mn	P	S	Cr	Ni	Mo	Co	Cu	N			PRE	FERRITE
569195	0,009	0,41	1,60	0,030	0,009	16,67	11,22	2,04	0,12	0,30	0,062				

Prove
Tests/Tests

Prova di corrosione A262 Prat. E: Conforme
Corrosion Test A262 Pract. E: In conformity
Essais de corrosion A262 Prat. E: En Conformité

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/EU annex I para 4.3

Materials comply with MESC 76/110 & 76/202.

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS ACC. TO ASTM A380
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication

Formato a freddo	**Senza saldatura**
Cold formed	Seamless
Formés à froid	Sans soudure

Ispezione
Inspection/inspéction
Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1045°C, raffreddamento in acqua
Solution Annealing at 1045°C water quenching
Hypertrempés à 1045°C, trempe à l'eau

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur
ROSETTI MARINO
Supply Management Dept.

☐ Witness ☒ Review

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

PTD 204334,JALAN PLATINUM UTAMA,

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZONE 12B, 81700 PASIR GUDANG

JOHOR DARUL TAKZIM, MALAYSIA

307-2518888 Fax: +607-2519999 Website: www.pantechsalloy.com

http // www.pantech-group.com

Certificato Fornitore

342 095 072 662

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Certified to NSF/ANSI 61 — Approval No : ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX I, PARA A.3
PED CERTIFICATE NO : 0343/PED/MUM/1110006/1

Customer:

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-46698

Date : 30 Dec 2023

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
806800 & 806740 & 806779 & 806820	E000006115	ASTM A403/A403M - 22 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 23 / ASME SA 960/SA960M - 21 / ASME SECTION II PART A-2021	Solution Treated, Pickled-Passivated

	Heat No.	Product & Size			Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
X	MO070-1	6" X 4"	SCH 40s	CON-REDUCER	60	WP316/316L-S	PASSED	N230129AW16
	MN076-1	8" X 6"	SCH 10s	CON-REDUCER	10	WP316/316L-S	PASSED	230204BE05-01
	MN077-1	2 1/2" X 2"	SCH 10s	ECC-REDUCER	60	WP316/316L-S	PASSED	230308BE10-01
	LN008-1	3" X 2"	SCH 10s	ECC-REDUCER	20	WP316/316L-S	PASSED	NY220918AT17
	MN073-1	3" X 2"	SCH 40s	ECC-REDUCER	60	WP316/316L-S	PASSED	221113AE04-02
	MN094-1	4" X 3"	SCH 10s	ECC-REDUCER	20	WP316/316L-S	PASSED	NY230412AT09
	LN011-1	4" X 3"	SCH 40s	ECC-REDUCER	10	WP316/316L-S	PASSED	NY220903AV08
	MB161-1	2"	SCH 10s	CAP	100	WP316/316L-S	PASSED	C00082
	MB320-1	3"	SCH 10s	CAP	100	WP316/316L-S	PASSED	C00082
	MB016-1	3"	SCH 40s	CAP	50	WP316/316L-S	PASSED	E10141

Specification / Heat No.	Chemical Composition (%)										Tensile Test *1			Hardness	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS (KSI / MPa)	TS (KSI / MPa)	E (%)	(HRB)	
Max	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-		-	-	-	90	
Min	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
MO070-1	0.018	0.35	0.85	0.032	0.001	16.25	10.01	2.01	< 0.01		256	594	54	81	PASSED
MN076-1	0.014	0.39	0.94	0.035	0.001	16.39	10.06	2.00	< 0.01		225	569	65	77	PASSED
MN077-1	0.013	0.29	1.06	0.035	0.001	16.44	10.04	2.03	< 0.01		280	556	55	64	PASSED
LN008-1	0.012	0.45	1.02	0.030	0.001	16.23	10.17	2.09	< 0.01		271	587	51	74	PASSED
MN073-1	0.012	0.26	0.99	0.036	0.001	16.18	10.03	2.01	< 0.01		228	560	60	67	PASSED
MN094-1	0.013	0.47	0.80	0.037	0.003	16.62	10.20	2.01	< 0.01		246	588	58	71	PASSED
LN011-1	0.015	0.34	0.88	0.033	0.001	16.52	10.01	2.06	< 0.01		246	573	60	76	PASSED
MB161-1	0.025	0.42	1.37	0.025	0.002	16.60	10.10	2.02	< 0.01		377	640	47	86	PASSED
MB320-1	0.025	0.42	1.37	0.025	0.002	16.60	10.10	2.02	< 0.01		377	640	47	88	PASSED
MB016-1	0.022	0.46	1.33	0.030	0.002	16.80	10.00	2.04	< 0.01		314	626	45	83	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION

TENSILE REQUIREMENTS CONFORMS TO ASTM A370-22 STANDARD, SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 1" BELOW BONE SIMULATION TEST FROM PIPE, LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA — STEEL MARKING PROCESS : ADD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-15 PRACTICE E

HARDNESS ACCORDING TO HACK-MR0175-2015 / ISO 15156-2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1010°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

*1. YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION - STANDARD SHOWN

MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT

Pantech Stainless & Alloy Industries Sdn. Bhd.
200601013677 (733428-W)
PTD 204334, Jalan Platinum Utama,
Kawasan Perindustrian Pasir Gudang, Zon 12B,
81700 Pasir Gudang, Johor,
Tel: +607-251 8888 Faxt: +607-251 9999

Head of Quality Assurance Department

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Form :FQA-0306 R.6; 04-03-2022

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 400 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. CONC. 6"x4" SCH.40S/10S SEAMLESS ALESATE DA SCH.40/S

raccortubi Heat num. or Pcs. marking: MO070-1 - Qty:6,00

Protocol: CTCERC202400004849 * CERTIFIED TRUE COPY * Issued 30-05-2024

raccortubi Heat num. or Pcs. marking: 11275A03 - Qty:2,00

Customer: ROSETTI MARINO S.p.A.

Description: RID. ECC. 4"x1.1/2" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S

Order: 1724000839 - 22.04.24 - Item n.: 420 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004849 * CERTIFIED TRUE COPY * Issued 30-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5 - 29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Quality System

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente RACCORTUBI S.p.A.
Customer/Client

Ordine N. OS000071 S DEL 20/03/2013
P.O.N./Commande N.

Pos. N. 2 **Q.tà** 28
Item/Poste Q.ty/Q.té

(*) Marcatura e cert. N. 1127SA03 **Data:** 18-09-2013
Material Marking e Cert. N. Date:

Descrizione ECC. REDS 4"x1.1/2" SCH.40/S
Description
Description

Specifica BW FITTINGS TO ASTM A/815M-10a
Specification ASME SA/815M ed.13 UNS S32760
Spécification DIMS/ENDS B16.9-2012

Materiale base - Fabbricante: TUBACEX Cert. No.: 570424
Raw material - manufacturer/Materiel du depart - fabriquant: SMLS PIPES TO ASTM A-790 UNS S32760 - TUBACEX Cert. No.: 570424

Test produzione Production test/Coupon de production	Caratteristiche meccaniche Mechanical Properties/Caracteristiques Mechaniques							
Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS	**Colata N.** Heat N. Coulée N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement 2"	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
QTR: 01/SDSS/A Rev.1 Specimens location drawing as per relevant QTR	46589	1841/13	700	891	36.4	HRC<28	HRC 24	SEE SIDER TEST CERTIFICATE 16387/13

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Coulée N.	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	W	N		PRE	FERRITE
46589	0,012	0,490	0,67	0,024	0,0005	25,55	6,90	3,63	0,69	0,62	0,2485		41.505	45,00

Prove
Tests/Tests

Altri G-48 MET.A
Others
Autres

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156-1 LAST ED. AND MR 0103-ed.10
CERTIFIED ACC.TO PED 97/23/EC
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTORY
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262 Pr E
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.:16387/13
- MATERIAL AND TESTS ACCORDING TO M-650 REV.4 - MDS D53 REV.4
- HEAT TREATMENT LOT:0142
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT WITH RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).
- POSITIVE MATERIAL IDENTIFICATION ON 100% OF THE PIECES : SATISFACTORY

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication
Formato a freddo Cold formed Formés à froid
Senza saldatura Seamless Sans soudure

Ispezione
Inspection/Inspéction
Esame visivo e dimensionale: Buono
Identificazione materiale: Buono

Visual and dimensional test: Satisfactory
Positive Material Identification: Satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: Satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1130°C

Solution Annealing at 1130°C , water quenching

Hypertrempés à 1130°C

Heat treatment soaking time for 30 minutes

Guaranteed caracteristics (A.M. du 24.03.78)
Caracteristiques garanties pour Z2CN18-10 et Z2CND17-13
C <= 0.25% Rm <= 760 N/mm2
S <= 0.05% Rm(A-2) <= 10500 N/mm2
P <= 0.05% A% sur 5,65√ So >= 16

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

376/996

raccortubi Heat num. or Pos. marking: 1127SA03 - Qty:2,00

Description: RID. ECC. 4"x1.1/2" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 420 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020 10

Protocol: CTCERC20240004849 * CERTIFIED TRUE COPY * Issued 30-05-2024

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Mechanical and Chemical Laboratory Non Destructive Test
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Tel.+39 0523 881.900 Fax+39 0523 842.903
http:\\www.sidertest.it sidertest@sidertest.it

RAPPORTO DI PROVA
TEST REPORT

PM 16387 / 13 Page 1 of 1

S.I.M. No.: 5037 / 13 F.C.P. No.: 5037 / 13 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**	Ordine / Order **OS000071 S**	Commessa / Job	**49/13** **13/0510**
Subcliente/Subcustomer /			

Descrizione / Description	**E.R. 4" x 1.1/2" SCH. 40S / 40S**	Quantità / Quantity	**38**	Posizione / Item	**2**	Prova Nr. / Test. Nr.	**1841/13**	Colata / Heat	**46589**	Materiale / Material	**ASTM A 815-10a UNS S32760**

Campione fornito dal Cliente / Sample supplied by the Customer: parte del prodotto finito / part of finished product

PROVA DI TRAZIONE — **Tensile test**

No. Prova Specimen	ID Prova ID Specimen	Metodo di prova Test method	Dimensioni Wth (mm)	Dimensioni Ø / Width ØPipe (mm)	Lo Lo	Posizione di prelievo Test position	Temp. Temp. (°C)	Snervamento Yield strength (MPa)		Rottura Tensile strength Rm (MPa)	Allungamento Elongation A (%)	Strizione Area Reduction Z (%)	S/R Ratio Yield strength / Tensile strength	Data esecuzione Date of Testing
1841/13	73556	ASTM A 370-12	5,07	6,2	25	B L FT	23	(≥ 550)	Rp0.2% **700**	(750/895)	**891**	(≥ 25) **36,4**		25/09/2013

Specifica / Specification: RTX_D53 Rev.5 — **Note /Remarks:** — **Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI RESILIENZA — **Notched-bar impact test**

No. Prova Specimen	ID Prova ID Specimen	Metodo di prova Test method	Dimensioni Dimension Size Width Length	Posizione di prelievo Test position	Tipo Type	Temp Temp. (°C)	Energia assorbita / Absorbed energy Valore singolo Single Value				Media Average	Area di taglio / Shear area Valore singolo (%) Single Value (%)	Media (%) Average (%)	Espansione laterale / Lateral expansion Valore singolo (mm) Single Value (mm)			Media (mm) Average (mm)	Data esecuzione Date of Testing
1841/13	73557	ASTM A 370-12	5 x 10 x 55	B L 1/2	KV	-51	J (≥ 42)	**93**	**98**	**96**	(≥ 49) **96**			(≥ 0,38) **1,96**	**2,00**	**1,98**	**1,98**	25/09/2013

Specifica / Specification: RTX_D53 Rev.5 — **Note /Remarks:** — **Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'**

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA.
e) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
b) We declare that this test report cannot be partially reproduced without our written approval.
c) Compliance with documents in "Specification" refers only to the tests described on this test report.
d) The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
e) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial) Th(Through Thickness)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale Date of Material Arrival	Data Rapporto di prova Test Report Date	Ispettore Inspector	Ispettore Inspector	Cliente Customer	Cliente Customer	Responsabile di Reparto Department Manager	Responsabile Laboratorio Laboratory Manager
20/09/2013	**26/09/2013**			ROSETTI MARINO Supply Management Dept Witness Review		**Marco Borile**	**Paolo Amani**

R_Rpt_TRP dt. 05/09/2012

firmato elettronicamente - electronically signed

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pcs. marking: 1127SA03 - Qty:2,00
Description: RID. ECC. 4"x1.1/2" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S
Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 420 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC20240000484 9 * CERTIFIED TRUE COPY
* Issued 30-05-2024

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RAPPORTO DI PROVA
TEST REPORT

E562 16387 / 13 Page 1 of 1

S.I.M. No.: 5037 / 13 F.C.P. No.: 5037 / 13 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer	Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC				Ordine / Order	OS000071 S		Commessa / Job	49/13 / 13/0510
Subcliente/Subcustomer	/								
Descrizione / Description	E.R. 4" x 1.1/2" SCH. 40S / 40S	Quantità / Quantity	38	Posizione / Item	2	Prova Nr. / Test. Nr.	1841/13	Colata / Heat	46589
Materiale / Material	ASTM A 815-10a UNS S32760								

Campione fornito dal Cliente / Sample supplied by the Customer: parte del prodotto finito / part of finished product

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti **Determining volume fraction by systematic manual point count** **Specifica: Specification: RTX_D53 Rev.5 + STATOIL -2010080 Rev.0**

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Direzione e Posizione / Location			Note / Remarks	Data esecuzione / Date of Testing
1841/13	73559	ASTM E 562-11	B	T	FT		25/09/2013

FORMULE USATE (Formulas used)

Percentuale media di punti (Pp): / Average Percentage of Points (Pp):
$$Pp = 1/n \times \sum_{i=1}^{n} Pp(i)$$

Deviazione Standard (s): / Standard Deviation (s):
$$s = \left[\frac{1}{n-1} \sum_{i=1}^{n} (Pp(i) - Pp)^2 \right]^{1/2}$$

95% Intervallo di scarto (95% CI): / 95% Confidence Interval (95%CI):
$$95\%CI = \frac{2.0 \times s}{(n-1)^{1/2}}$$

Errore (%): / Error (%):
$$\frac{95\%CI \times 100}{Pp}$$

Frazione di Volume (Vv%): / Volume Fraction (Vv %):
$$Vv = Pp \pm 95\%CI$$

RISULTATI (Min. 40%, Max. 55%)
Results (Min. 40%, Max. 55%)

Vv (% Frazione di volume della Ferrite) / Vv (% Volume fraction of the constituent):	45.00 ± 2.04
% Errore (RA): / % Error (RA):	4,53
Nr. di campi per provino/sezione/spaziatura/angolo: / Nr. of fields for specimens/section/spacing/angle:	30 / 8 x 20 mm / 1 x 3 mm / 45°
Preparazione del provino: / Sample preparation:	NaOH + Electrolytic
Ingrandimento: / Magnification:	500 X
Misura del reticolo: / Grid size:	40 mm x 40 mm 5 x 5 = 25 Points

% Frazione di volume della Ferrite per ciascun campo esaminato
% Volume fraction of the costituent for each metallographic section

1	40
2	40
3	48
4	44
5	46
6	54
7	48
8	38
9	44
10	50
11	38
12	46
13	38
14	54
15	52
16	40
17	38
18	38
19	44
20	36
21	48
22	44
23	54
24	50
25	40
26	50
27	52
28	46
29	46
30	44

Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
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d) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Brunch)
T(Transversal) L(Longitudinal). Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), w/n (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
20/09/2013	26/09/2013			ROSETTI MARINO Supply Management Dept.		Stefano Antonielli	Paolo Amani
				☐ Witness	☐ Review	firmato elettronicamente - electronically signed	

R_Rpt_E562 dt. 05/09/2012

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pcs. marking: 1127SA03 - Qty:2,00

Description: RID. ECC. 4"x1.1/2" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 420 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002010

Protocol: CTCERC20240004849 * CERTIFIED TRUE COPY * Issued 30-05-2024

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Mechanical and Chemical Laboratory Non Destructive Test
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RAPPORTO DI PROVA
TEST REPORT

MIC 16387 / 13 Page 1 of 2

S.I.M. No.: 5037 / 13 F.C.P. No.: 5037 / 13 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer	**Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**				Ordine		**OS000071 S**		Commessa	**49/13**
Subcliente/Subcustomer	/				Order				Job	**13/0510**
Descrizione	**E.R. 4" x 1.1/2" SCH. 40S / 40S**	Quantità	**38**	Posizione	**2**	Prova Nr.	**1841/13**	Colata	**46589**	Materiale	**ASTM A 815-10a UNS S32760**
Description		Quantity		Item		Test. Nr.		Heat		Material	

Campione fornito dal Cliente / Sample supplied by the Customer: parte del prodotto finito / part of finished product

ESAME MICROGRAFICO
Micrographic examination

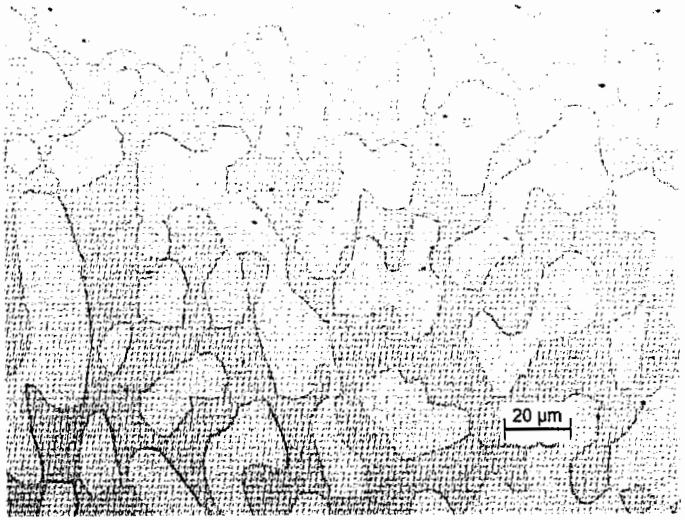
Specifica Specification: **RTX_D53 Rev.5 + STATOIL -2010080 Rev.0**

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Direzione e Posizione / Location	Temp. / Temp. (°C)	Data esecuzione / Date of Testing
1841/13	73560	ASTM E 3-11+ASTM E 407-07e1	B T FT	20	25/09/2013

Attacco: / Etching: 10% Oxalic

Ingrandimento: / Enlargement: 500 X

Area esaminata: / Area examined: Materiale base / Base Material



Note: / Remarks: Struttura libera da nitruri. / Structure free from nitrides.

Esito delle prove / Conclusion: **Conforme a 'Specifica' / Compliant with 'Specification'**

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
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d) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal). Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter). D-mm (Inside Diameter). FT (Full Thk). R (Root). n/n (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Cliente / Customer
20/09/2013	**26/09/2013**			ROSETTI MARINO Suoply Management Dept. Witness	Review

Responsabile di Reparto / Department Manager: **Stefano Antonielli**
Responsabile Laboratorio / Laboratory Manager: **Paolo Amani**
firmato elettronicamente - electronically signed

FI_Rpt_MIC dt. 05/09/2012

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pcs. marking: 1127SA03 - Qty:2,00

Description: RID. ECC. 4"x1.1/2" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 420 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004849 • CERTIFIED TRUE COPY • Issued 30-05-2024

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RAPPORTO DI PROVA
TEST REPORT
MIC 16387 / 13 Page 2 of 2
S.I.M. No.: 5037 / 13 F.C.P. No.: 5037 / 13 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**	Ordine / Order	**OS000071 S**	Commessa / Job **49/13** / **13/0510**
Subcliente/Subcustomer /			

ESAME MICROGRAFICO
Micrographic examination

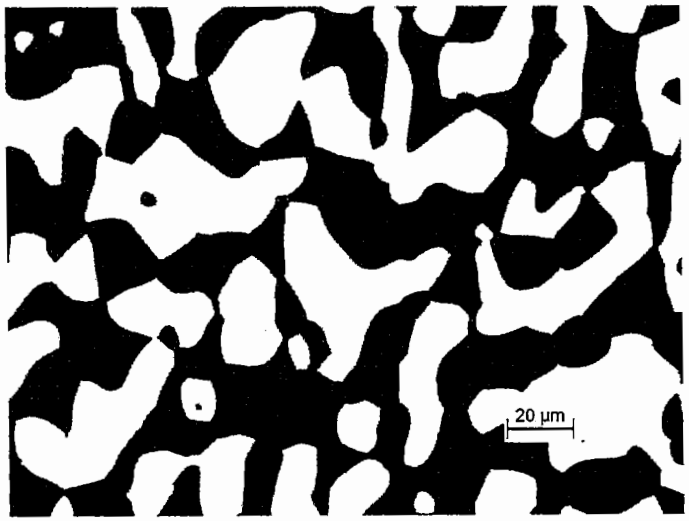
Specifica Specification: **RTX_D53 Rev.5 + STATOIL -2010080 Rev.0**

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Direzione e Posizione / Location	Temp. / Temp. (°C)	Data esecuzione / Date of Testing
1841/13	73561	ASTM E 3-11+ASTM E 407-07e1	B T FT	20	25/09/2013

Attacco / Etching: 20% NaOH

Ingrandimento / Enlargement: 500 X

Area esaminata / Area examined: Materiale base / Base Material



Note / Remarks: Struttura libera da precipitazioni a bordo grano e fasi intermetalliche./Structure free from grain boundary carbides and intermetallic phases.

Esito delle prove / Conclusion: **Conforme a 'Specifica' / Compliant with 'Specification'**

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il campionamento dei provini viene eseguito dal Cliente.

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Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
20/09/2013	**26/09/2013**			ROSETTI MARINO Supply Management Dept. Witness	Review	**Stefano Antonielli**	**Paolo Amani**

firmato elettronicamente - electronically signed

R_Rpl_MIC dt. 05/09/2012

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pos. marking: 1127SA03 - Qty:2,00
Customer: ROSETTI MARINO S.p.A.
Description: RID. ECC. 4"X1.1/2" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S
Order: 1724000839 - 22.04.24 - Item n.: 420 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004849 * CERTIFIED TRUE COPY * Issued 30-05-2024

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RAPPORTO DI PROVA
TEST REPORT
G48ACE 16387 / 13 Page 1 of 1
S.I.M. No.: 5037 / 13 F.C.P. No.: 5037 / 13 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**				Ordine / Order	**OS000071 S**	Commessa / Job	**49/13** / **13/0510**
Subcliente/Subcustomer /							
Descrizione / Description **E.R. 4" x 1.1/2" SCH. 40S / 40S**	Quantità / Quantity **38**	Posizione / Item **2**	Prova Nr. / Test. Nr. **1841/13**	Colata / Heat **46589**	Materiale / Material	**ASTM A 815-10a UNS S32760**	

Campione fornito dal Cliente / Sample supplied by the Customer: parte del prodotto finito / part of finished product

Prova di "pitting" in ferro-cloruro **Ferric chloride pitting test** **Specifica: Specification: RTX_D53 Rev.5**

No. Prova Specimen	ID Prova ID Specimen	Metodo di prova Test method	Direzione e Posizione Location	Note Remarks
1841/13 - 1	73563	ASTM G 48-11 - Met. A	B L FT	

Dimensioni / Dimensions

Lunghezza - L (mm): 48,40 Length - L (mm):
Larghezza - W (mm): 24,80 Width - W (mm):
Spessore - T (mm): 5,80 Thickness - T (mm):
Area (cm²): [(LxWx2) + (WxTx2) + (LxTx2)] / 100 Area (cm²): 32,50

Provino in Materiale Base
Specimen in Base Material

Preparazione provino / Specimen preparation: Meccanica ☑ Mechanical Chimica ☐ Chemical

Temperatura di prova (°C) / Test temperature (°C): 50
Soluzione / Solution: FeCl3 · 6H2O 10% WATER SOLUTION

Tempo di esposizione (ore) / Exposure time (hours): 24

Data e ora inizio / Initial date and time: 25/09/2013 13:45:00
Data e ora fine / End date and time: 26/09/2013 13:45:00

Peso iniziale (g) / Initial weight (g): 54,2155
Peso finale (g) / Final weight (g): 54,2152
Perdita totale di peso (g) / Weight total loss(g): 0.0003

Perdita di massa g/m² / Specimen mass loss: 0,0923

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X
NOT PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata (cm²) / Examined area (cm²): (LxWx2)/100: 24,01

Media della profondità dei pit (µm) / Average of pits depth (µm): 0.00

No. Pit lato A(superficie) / Nr. Pit side A (surface): 0,00
No. Pit lato B / Nr. Pit side B: 0,00
Pit per cm²: 0.00

Massima profondità dei pit (µm) / Maximum pit depth (µm): 0,00

Limite perdita di massa g/m² max. / Limit Specimen mass loss max.: 4,000

Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
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Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Rtn) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mn (Outside Diameter), D-mn (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
20/09/2013	**26/09/2013**			ROSETTI MARINO Supply Management Dept.		**Stefano Antonielli**	**Paolo Amani**
R_Rpt_G48ACE dt. 05/09/2012				Witness	Review	firmato elettronicamente - electronically signed	

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

raccortubi Heat num. or Pos. marking: 11275A03 - Qty:2,00
Customer: ROSETTI MARINO S.p.A.
Description: RID. ECC. 4"x1.1/2" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S
Order: 1724000839 - 22.04.24 - Item n.: 420 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004849 * CERTIFIED TRUE COPY
* Issued 30-05-2024

SIDER TEST S.r.l
Laboratorio Prove e Collaudi Controlli Non Distruttivi
Mechanical and Chemical Laboratory Non Destructive Test
Sede legale ed amministrativa:
Strada della Barianella, 1/B - I-29015 Castel San Giovanni (PC)
U.O. Sede B: Viale dell'industria, 25 - I-29015 Castel San Giovanni (PC)
Tel.+39 0523 881.900 Fax+39 0523 842.903
http:\\www.sidertest.it sidertest@sidertest.it

RAPPORTO DI PROVA
TEST REPORT
ANL 16387 / 13 Page 1 of 1
S.I.M. No.: 5037 / 13 F.C.P. No.: 5037 / 13 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer	Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC	Ordine / Order	OS000071 S
Subcliente/Subcustomer	/	Commessa / Job	49/13 — 13/0510

Descrizione / Description	E.R. 4" x 1.1/2" SCH. 40S / 40S	Quantità / Quantity	38	Posizione / Item	2	Prova Nr. / Test. Nr.	1841/13	Colata / Heat	46589	Materiale / Material	ASTM A 815-10a UNS S32760

Campione fornito dal Cliente / Sample supplied by the Customer: parte del prodotto finito / part of finished product

ANALISI SPETTROMETRICA AD EMISSIONE ATOMICA SOTTOVUOTO **Atomic emission vacuum Spectrometric analysis** **Specifica: Specification: RTX_D53 Rev.5**

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Direzione e Posizione / Location	Temp. / Temp. (°C)	Note / Remarks	Data esecuzione / Date of Testing
1841/13	73566	ASTM E 1086-08	B UP	20		25/09/13

C %	0,014	Al %		Zr %		FORMULE	FORMULAS
Si %	0,53	Co %		Zn %			
Mn %	0,653	Nb %		O %			
P %	0,022	Ti %		Fe %			
S %	0,004	W %	0,6	Ca %			
Cr %	25,433	Pb %		Ta %			
V %		Sn %		Sb %		PREN	41,51
Mo %	3,626	As %					
Ni %	6,912	B %					
Cu %	0,652	N %	0,257				

ID Gruppo / Group ID:

Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

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Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
20/09/2013	26/09/2013			ROSETTI MARINO Supply Management Dept.	Stefano Antonielli	Paolo Amani

R_Rpt_ANL dt. 05/09/2012

☐ Witness ☑ Review

firmato elettronicamente - electronically signed

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raccortubi Heat num. or Pos. marking: 1127SA03 - Qty:2,00
Description: RID. ECC. 4"x1.1/2" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S
Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 420 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020 10
Protocol: CTCERC20240000484 9 * CERTIFIED TRUE COPY
* Issued 30-05-2024

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RAPPORTO DI PROVA
TEST REPORT

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S.I.M. No.: 5037 / 13 F.C.P. No.: 5037 / 13 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**	Ordine / Order	**OS000071 S**	Commessa / Job **49/13** **13/0510**
Subcliente/Subcustomer /			

Descrizione / Description	**E.R. 4" x 1.1/2" SCH. 40S / 40S**	Quantità / Quantity	**38**	Posizione / Item	**2**	Prova Nr. / Test. Nr.	**1841/13**	Colata / Heat	**46589**	Materiale / Material	**ASTM A 815-10a UNS S32760**

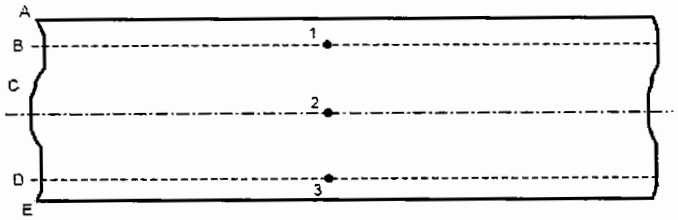
Campione fornito dal Cliente / Sample supplied by the Customer: parte del prodotto finito / part of finished product

PROVA DI DUREZZA HBW (Strumento di misura dell'impronta di Tipo A)
HBW hardness test (Indentation measuring device Type A)

Specifica: Specification: RTX_D53 Rev.5

No. Prova Specimen	ID Prova ID Specimen	Metodo di prova Test method	Posizione di prelievo Test position		Durezza Hardness	Note Note	Data esecuzione Date of Testing
1841/13	73558	ASTM E 10-12	B	T	HB 2,5/187,5		25/09/2013

Minimo richiesto Rich. Ord. Min. Request Ord. Reqs ☐
Massimo richiesto Rich. Ord. Max. Request Ord. Reqs **270** ☐



AB=DE= 2 mm AC= 1/2 AE

Valori ottenuti / Hardness Numbers

1	2	3
250	**256**	**260**

Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

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T(Transversal) L(Longitudinal) Tg(Tangential) Ax(Axial) Rd(Radial)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale Date of Material Arrival	Data Rapporto di prova Test Report Date	Ispettore Inspector	Ispettore Inspector	Cliente Customer	Cliente Customer	Responsabile di Reparto Department Manager	Responsabile Laboratorio Laboratory Manager
20/09/2013	**26/09/2013**			ROSETTI MARINO Supply Management Dept.		**Marco Borile**	**Paolo Amani**
				☐ Witness	☑ Review	firmato elettronicamente - electronically signed	

R_Rpt_DUR1 dt. 13/03/2012

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raccortubi Heat num. or Pos. marking: 1127SA03 - Qty:2,00
Description: RID. ECC. 4"x1.1/2" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S
Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 420 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000210
Protocol: CTCERC2024000849 * CERTIFIED TRUE COPY * Issued 30-05-2024

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RAPPORTO DI PROVA
TEST REPORT
A923A 16387 / 13 Page 1 of 1
S.I.M. No.: 5037 / 13 F.C.P. No.: 5037 / 13 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / Data supplied by the Customer:

Cliente/Customer	**Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**				Ordine / Order	**OS000071 S**		Commessa / Job	**49/13 13/0510**
Subcliente/Subcustomer	/								
Descrizione / Description	**E.R. 4" x 1.1/2" SCH. 40S / 40S**	Quantità / Quantity	**38**	Posizione / Item	**2**	Prova Nr. / Test. Nr.	**1841/13**	Colata / Heat	**46589**
Materiale / Material	**ASTM A 815-10a UNS S32760**								

Campione fornito dal Cliente / Sample supplied by the Customer: parte del prodotto finito / part of finished product

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio
Detecting Detrimental Intermetallic Phase: Sodium Hydroxide Etch Test

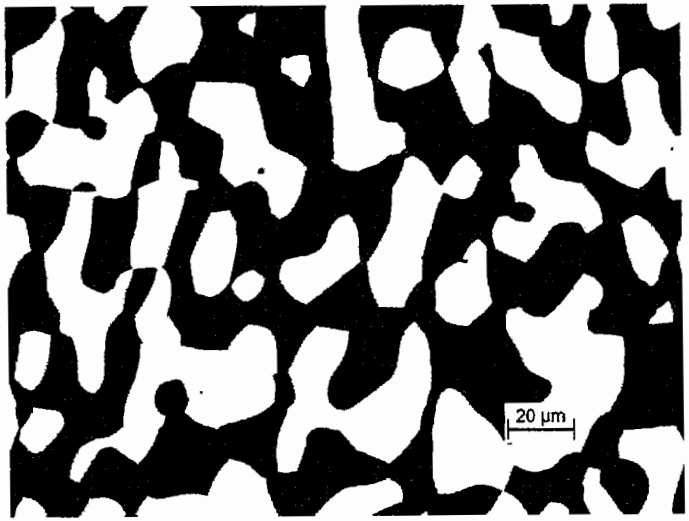
Specifica Specification: **RTX_D53 Rev.5 + STATOIL -2010080 Rev.0**

No. Prova / Specimen	ID Prova / ID Specimen	Metodo di prova / Test method	Direzione e Posizione / Location	Temp. / Temp. (°C)	Data esecuzione / Date of Testing
1841/13	73565	ASTM A 923-08 (Met. A)	B T FT	20	25/09/2013

Attacco / Etching: NaOH + Electrolytic

Ingrandimento / Enlargement: 500 X

Area esaminata / Area examined: Materiale base / Base Material



Note / Remarks: Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure. Struttura libera da precipitazioni a bordo grano e fasi intermetalliche./Structure free from grain boundary carbides and intermetallic phases.

Esito delle prove / Conclusion: **Conforme a 'Specifica' / Compliant with 'Specification'**

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Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
20/09/2013	**26/09/2013**			ROSETTI MARINO *Supply Management Dept.*		**Stefano Antonielli**	**Paolo Amani**
R_Rpt_A923A dt. 05/09/2012				☐ Witness	☐ Review	firmato elettronicamente - electronically signed	

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raccortubi Heat num. or Pos. marking: 11275A03 - Qty:2,00

Description: RID. ECC. 4"x1.1/2" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 420 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O

Protocol: CTCERC20240004849 * CERTIFIED TRUE COPY * Issued 30-05-2024

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RAPPORTO DI PROVA
TEST REPORT
A923C 16387 / 13 Page 1 of 1
S.I.M. No.: 5037 / 13 F.C.P. No.: 5037 / 13 A / A

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

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Subcliente/Subcustomer	/								
Descrizione / Description	**E.R. 4" x 1.1/2" SCH. 40S / 40S**	Quantità / Quantity	**38**	Posizione / Item	**2**	Prova Nr. / Test. Nr.	**1841/13**	Colata / Heat	**46589**
Materiale / Material	**ASTM A 815-10a UNS S32760**								

Campione fornito dal Cliente / Sample supplied by the Customer: parte del prodotto finito / part of finished product

Individuazione di fasi intermetalliche dannose: Prova di corrosione per "pitting" in cloruro ferrico **Specifica: Specification: RTX_D53 Rev.5**
Detecting Detrimental Intermetallic Phase: Ferric Chloride Pitting Corrosion Test

No. Prova Specimen	ID Prova ID Specimen	Metodo di prova Test method	Direzione e Posizione Location	Note Remarks
1841/13	73564	ASTM A 923-08 (Met. C)	B L FT	

Dimensioni / Dimensions

Lunghezza (mm): 52,1 Length (mm):
Larghezza (mm): 25,1 Width (mm):
Spessore (mm): 7,1 Thickness (mm):
Area (cm²): 37,12 Area (cm²):

Provino in Materiale Base
Specimen in Base Material

Preparazione provino: Specimen preparation: Meccanica ☑ Mechanical Chimica ☐ Chemical

Temperatura di prova (°C): Specimen preparation (°C): 40

Tempo esposizione (ore): Specimen preparation (hours): 24

Soluzione: Solution: FeCl3 · 6H2O 10% water solution

Peso iniziale (g): Initial weight (g): 73,3490
Peso finale (g): Final weight (g): 73,3488
Perdita di peso (g): Weight loss (g): 0,0002
Perdita della massa (g/m²): Specimen mass loss 0,054
Velocità di corrosione (mg/(dm²*d)) Corrosion rate (mg/(dm²*d)): 0,5
Data inizio: Initial date 25/09/2013 13:45:00 Data fine: End date 26/09/2013 13:45:00
Limite velocità di corrosione (mg/(dm²*d)) max.: 10,0
Corrosion rate limit (mg/(dm²*d)) max.

Esito delle prove / Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

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Data Ingresso Materiale / Date of Material Arrival	Data Rapporto di prova / Test Report Date	Ispettore / Inspector	Ispettore / Inspector	Cliente / Customer	Cliente / Customer	Responsabile di Reparto / Department Manager	Responsabile Laboratorio / Laboratory Manager
20/09/2013	**26/09/2013**			ROSETTI MARINO Supply Management Dept. ☐ Witness	☑ Review	**Stefano Antonielli**	**Paolo Amani**

R_Rpt_A923C dt. 05/09/2012

firmato elettronicamente - electronically signed

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中国浙江省温州经济技术开发区金海园区滨海六道366号
No.366,Avenue 6,Binhai, Jinhai Industrial Park, Economy& Technology Developing Zone, Wenzhou, 325025, Zhejiang Province, China

产品质量证明书

Mill Test Certificate

压力管道元件 TS Cert. No.:TS2733G94-2024
ISO 9001:2015: 50095-2009-AQ-RGC-RvA
PED 2014/68/EU Cer: 07/202/9030/WZ/2456/20
AD 2000-Merkblatt W0 Cert. No.:07/202/9030/WP/2456/20

编号No.:JNDIA/R08-29

证书 Certificate: EN10204 3.1 证书号 Certificate No.: JNDIA2023-GW1177-01 页次 Page 1 of 1

客 户
产品描述 Description:STAINLESS STEEL PIPE FITTING
交货状态 Delivery Condition: 固溶Solution annealed

订单号PO No.:806771
材质 Material:ASTM A403-22/ASME SA403-21 WP316/316L
生产标准 Manufacturing Standard:ASME B16.9-2018

产品交货情况 Product Delivery:

序号 NO.	品名Description	规格Specification	材质 Material	数量 Quantity(PCS)	炉号 Heat No.	备注Remarks
0285	Red Tee	1" x 3/4" sch40s	WP316/316L-S	10	EF6171	

检测结果（标准要求已符合，见如下表格)Inspection Results(The Requirements are fulfilled as listed in Annex)

A.化学成分 Chemical Composition: [%]

炉号Heat No.		C ≤0.030	Si ≤1.00	Mn ≤2.00	P ≤0.045	S ≤0.030	Cr 16.0-18.0	Ni 10.0-14.0	Nb	N	Ti	Mo 2.0-3.0
0285	EF6171	0.023	0.49	1.06	0.028	0.001	16.64	10.08				2.09

B.机械性能 Mechanical Property:

炉号 Heat No.		屈服强度Yield Strength(MPa) ≥205	拉伸强度 Tensile Strength(MPa) ≥515	延伸率 Elongation(%) ≥28	硬度 Hardness (HRC) ≤22	断面收缩率 Reduction of Area(Z%)	冲击试验 Charpy Impact(AK)
		$R_P0.2$	R_m	A50			
0285	EF6171	306	614	52	<20<20<20	/	/

C.检测及相关数据验证 Inspection and Related Data Verify

尺寸检查 Dimensional Check	ACC	晶间腐蚀 Corrosion Test ASTM A262 Practice E	ACC
表面检查 Surface Visual Inspection	ACC		
光谱分析 100%PMI	ACC		

D.备注Remarks:

ASME Code Sec II Part A2017 .NACE MR1075 resp. MR0103 ISO 15156 we hereby confirm that material is free of radioactivity contamination.La société Jndia garantit que tous les produits, objet du certificat susdit, respectent dans leur totalité les spécifications de l'article 15 de l'Arreté,ministeriel du 24 Mars 1978, c'est à dire C≤0.25% - P<0.05% S<0.05% - Rm<800 N/mm2 - Rm(A-2)10500 min. A% sur 5.65 V So.min 16% - E<0.8R; Melting Process：AOD，Cold forming
This Material (BW Fittings, HS Code 730723), is produced/melted by Zhejiang Jndia Pipeline Industry Co. Ltd. Steel Mill China and is of 100% Chinese Origin.Because mentioned HS Code is listed in EU Regulation 833/2014 Annex XVII and further amendment, we additionnally confirm that no material of Russian Origin has been used in the production of this product.

制单人：黄林飞 审 核： 日期： 2024-01-09 质检专检验部门(章)!
Prepared by: Huang Linfei Reviewed by Date Stamp

ROSETTI MARINO
Supply Management D...

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 560 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: TEE RID. 1"x3/4" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: EF6171 - Qty:10,00 Protocol: CTCERC202400004849 * CERTIFIED TRUE COPY * Issued 30-05-2024

raccortubi Heat num. or Pcs. marking: 1067621 - Qty:15,00

Description: TEE RID. 1"x3/4" SCH.40/S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 560 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O

Protocol: CTCERC20240004849 * CERTIFIED TRUE COPY * Issued 30-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5
29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente Customer/ RACCORTUBI S.p.A.

Ordine N. P.O.N./C.N. OS0000200 S DEL 09-12-2020

Pos. N. Item/Poste 2 **Q.tà** Q.ty/Q.té 132

(*) Marcatura e cert. N. Material Marking e Cert. N. 1067621

Created on: 04-02-2021

Descrizione Description Description RED.TEES 1"x3/4" SCH.40/S

Specifica Specification Spécification FITTINGS TO ASTM A403/403M-20
ASME SA403/SA403Sect. II Part.A ed.19 WP 316/316L
DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: SeAH CSS Cert. No.: 200514-S090
Raw material - manufacturer/Materiel du depart - fabriquant:
SeAH CSS Cert. No.: 200514-S090

Specifica Specification/Specification	Caratteristiche meccaniche Mechanical Properties/Caracteristiques Mechaniques							
	Colata N. Heat N. Couléè N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
SMLS PIPES TO ASME/ASTM SA/A 312TP 316/316L, DIMS TO ANSI B36.19	N20887	B04P018600	225	525	58	HRC<22	HRC 6	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Couléè N.	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**Mo**	**N**					**PRE**	**FERRITE**
N20887	0,019	0,439	1,010	0,0279	0,0074	16,714	12,087	2,041	0,0068						

Prove
Tests/Tests

Prova di corrosione A262 Prat. E: Conforme
Corrosion Test A262 Pract. E: In conformity
Essais de corrosion A262 Prat. E: En Conformité

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/UE annex I para 4.3

Materials comply with MESC 76/110 & 76/202.

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication
Formato a freddo Cold formed Formés à froid
Senza saldatura Seamless Sans soudure

Ispezione
Inspection/inspéction
Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1045°C

Solution Annealing at 1045°C , water quenching

Hypertrempés à 1045°C

Guaranteed caracteristics (A.M. du 24.03.78)
Caracteristiques garanties pour Z2CN18-10 et Z2CND17-13
C <= 0.25% Rm <= 760 N/mm2
S <= 0.05% Rm(A-2) <= 10500 N/mm2
P <= 0.05% A% sur 5,65 sqrt(So) >= 16

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

ROSETTI MARINO
Supply Management Dept.
Ispettore
Inspector/Inspecteur

☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: 221008AS16 - Qty:4,00
Description: TEE RID. 2"x3/4" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S
Customer: ROSETTI MARINO S.p.A.
Order: 1724000639 - 22.04.24 - Item n.: 580 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400004849 * CERTIFIED TRUE COPY * Issued 30-05-2024

良豐不銹鋼管件有限公司
LIANG FENG STAINLESS STEEL FITTING CO., LTD.
高雄市路竹區中山南路74號
NO. 74, Zhongshan S. Rd., Luzhu District, Kaohsiung City 821, Taiwan R.O.C.
TEL: 886-7-6970588 FAX: 886-7-6970599

ISO-9001 LRQA
Certificate No.: 10303342
PED 2014/68/EU
Approval Certificate No.:00014950

JIS B2313
Certificate No.: JWTW 13002
JIS B2309
Certificate No.: JWTW 13001

EN10204-3.1

客戶 PURCHASER: Raccortubi S.p.A.
規範 PRODUCT SPEC.: ASTM A403/403M-22 / ASME SA403-21
原料 RAW MATERIAL: ASTM A312-2019/ASME SA312-2021
檢驗規範 INSP. SPEC.: ASME B16.9-18

檢驗證明書
INSPECTION CERTIFICATE

本證書請妥善保存遺失恕不補發
Please keep this certificate properly. If it is lost, it will not be reissued.

頁次 PAGE: 1
日期 DATE: 2023/4/26
證書號碼 CERTIFI. NO.: 23041040

CTCERT202300002777.1.0001

ITEM NO. 項次	PRODUCT & SIZE 產品品名&尺寸	QUANTITY PCS 數量	MATERIAL HEAT NO. 爐號	MANUFACTURING NO. 製造工令	CUSTOMER'S ORDER NO. 客戶訂單號碼	P. I. N.O. 銷貨編號	REMARKS 備註
11	R TEE 2" X 3/4" SCH40S WP316/316L-S	20	221008AS16	23020006	00000022 S	23040721	cold formed,seamless execution

ITEM NO. 項次	SPECIFICATION 說明		CHEMICAL COMPOSITION % 化學成份 C碳	Si矽	Mn錳	P磷	S硫	Cu銅	Ni鎳	Cr鉻	Mo鉬	V釩	Nb鈮	PHYSICAL 物理性質 YS 降伏點 Mpa	TS 抗拉強度 Mpa	E 延伸率 %	HARD,HRB 硬度
	STANDARD	MIN.							10.00	16.00	2.00			170	485	28	
		MAX.	0.030	1.00	2.00	0.045	0.030		14.00	18.00	3.00			0	0	0	
11			0.023	0.33	0.98	0.034	0.001		10.05	16.17	2.14			265	611	69.0	72

HEAT TREATMENT 熱處理 1060°C ±10° W.Q.	DIMENTIONAL INSPECTION 尺寸檢查	VISUAL INSPECTION 外觀檢查	NONDESTRUCTIVE EXAMINATION (PT. UT. RT.) 非破壞檢測
Solution Annealing, Good	GOOD	GOOD	

WE HEREBY CERTIFIED THAT THE ABOVE MATERIAL HAD BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND WAS FOUND TO MEET THE REQUIREMENTS OF ABOVE SPECIFICATIONS AND PURCHASER'S ORDER.
茲證明上述材料按照規範進行製造，取樣，檢測和檢驗，符合上述規範和採購訂單的要求。

備註：
1. 100% P.M.I.: Satisfactory. 2. Material conforms to NACE MR0175/ISO 15156(2021) & MR0103(2015). 3. Corrosion test acc. ASTM A262 Practice E: Satisfactory. 4. Fittings in pickled and passivated condition. 5. Heat Treatment soaking time 25~28min, and rapidly cold with water.

良豐不銹鋼管件有限公司 品檢專用章 Quality Inspection Stamp Liang Feng Stainless Steel Fitting Co., Ltd.

歐勁軒
MANAGER OF Q. A. DEPT. 品管課經理

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.
Description: TEE RID. 2"x1" SCH.10S/40S SEAMLESS ALESATE DA SCH.40/S
Order: 1724000839 - 22.04.24 - Item n.: 590 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000010
Heat num. or Pcs. marking: N220713AT01 - Qty:2,00
Protocol: CTCERC20240004849 * CERTIFIED TRUE COPY
* Issued 30-05-2024
CTCERT20230005044.1.0001

良豐不銹鋼管件有限公司
LIANG FENG STAINLESS STEEL FITTING CO., LTD.
高雄市路竹區中山南路74號
NO. 74, Zhongshan S. Rd., Luzhu District, Kaohsiung City 821, Taiwan R.O.C.
TEL：886-7-6970588 FAX：886-7-6970599

ISO-9001 LRQA Certificate No.: 10303342
PED 2014/68/EU Approval Certificate No.:00014950
JIS B2313 Certificate No.: JWTW 13002
JIS B2309 Certificate No.: JWTW 13001

EN10204-3.1

客戶 PURCHASER: Raccortubi S.p.A.
規範 PRODUCT SPEC.: ASTM A403/403M-22 ASME SA403-21
原料 RAW MATERIAL: ASTM A312-2019/ASME SA312-2021
檢驗規範 INSP. SPEC.: ASME B16.9-18

檢驗證明書
INSPECTION CERTIFICATE

本證書請妥善保存遺失恕不補發
Please keep this certificate properly. If it is lost, it will not be reissued.

頁次 PAGE: 1
日期 DATE: 2023/9/21
證書號碼 CERTIFI. NO.: 23090878

ITEM NO. 項次	PRODUCT & SIZE 產品品名&尺寸	QUANTITY PCS 數量	MATERIAL HEAT NO. 爐號	MANUFACTURING NO. 製造工令	CUSTOMER'S ORDER NO. 客戶訂單號碼	P. I. N.O. 銷貨編號	REMARKS 備註
31	R TEE 2" X 1" SCH40S WP316/316L-S	20	N220713AT01	23070001	00000166 S	23090223	cold formed,seamless execution

ITEM NO. 項次	SPECIFICATION 說明		CHEMICAL COMPOSITION % 化學成份 C碳	Si矽	Mn錳	P磷	S硫	Cu銅	Ni鎳	Cr鉻	Mo鉬	V釩	Nb鈮	PHYSICAL 物理性質 YS 降伏點 Mpa	TS 抗拉強度 Mpa	E 延伸率 %	HARD,HRB 硬度
	STANDARD	MIN.							10.000	16.000	2.000			170	485	28	
		MAX.	0.030	1.000	2.000	0.045	0.030		14.000	18.000	3.000			0	0	0	
31			0.021	0.350	1.080	0.033	0.001		10.150	16.230	2.110			289	589	56	88.06

HEAT TREATMENT 熱處理 1060°C ±10° W.Q.	DIMENTIONAL INSPECTION 尺寸檢查	VISUAL INSPECTION 外觀檢查	NONDESTRUCTIVE EXAMINATION (PT. UT. RT.) 非破壞檢測
Solution Annealing, Good	GOOD	GOOD	

WE HEREBY CERTIFIED THAT THE ABOVE MATERIAL HAD BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND WAS FOUND TO MEET THE REQUIREMENTS OF ABOVE SPECIFICATIONS AND PURCHASER'S ORDER.
茲證明上述材料按照規範進行製造，取樣，檢測和檢驗，符合上述規範和採購訂單的要求。

備註： 1. 100% P.M.I.: Satisfactory. 2. Material conforms to NACE MR0175/ISO 15156(2021) & MR0103(2015). 3. Corrosion test acc. ASTM A262 Practice E: Satisfactory. 4. Fittings in pickled and passivated condition. 5. Heat Treatment soaking time 25~28min, and rapidly cold with water. 6. No Russian materials were used during the whole production cycle.

良豐不銹鋼管件有限公司 品檢專用章 Quality Inspection Stamp

MANAGER OF Q. A. DEPT.
品管課經理

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

S0152001-3*

JNDIA®

浙 江 志 达 管 业 有 限 公 司

Zhejiang Jndia Pipeline Industry Co.,Ltd

电话tel: +86-577-85826161 传真fax: +86-577-85826565 电子信箱Email: sales@jndia.com.cn

中国浙江省温州经济技术开发区金海园区滨海六道366号

No.366,Avenue 6,Binhai, Jinhai Industrial Park, Economy& Technology Developing Zone, Wenzhou, 325025, Zhejiang Province, China

产品质量证明书

Mill Test Certificate

压力管道元件 TS Cert. No.:TS2733G94-2024

ISO 9001:2015: 50095-2009-AQ-RGC-RvA

PED 2014/68/EU Cer: 07/202/9030/WZ/2456/20

AD 2000-Merkblatt W0 Cert. No.:07/202/9030/WP/2456/20

编号No.:JNDIA/R08-29

证书 Certificate: EN10204 3.1 证书号 Certificate No.: JNDIA2023-GW1282-01 页次 Page 1 of 1

客 户 Client

订单号PO No.:806798

产品描述 Description:STAINLESS STEEL PIPE FITTING

材质 Material:ASTM A403-22/ASME SA403-21 WP316/316L

交货状态 Delivery Condition: 固溶Solution annealed

生产标准 Manufacturing Standard:ASME B16.9-2018

产品交货情况 Product Delivery:

序号 NO.	品名Description	规格Specification	材质 Material	数量 Quantity(PCS)	炉号 Heat No.	备注Remarks
0064	Red Tee	10" x 6" sch10s	WP316/316L-S	10	EF1761	

检测结果（标准要求已符合，见如下表格)Inspection Results(The Requirements are fulfilled as listed in Annex)

A.化学成分 Chemical Composition: [%]

炉号Heat No.		C ≤0.030	Si ≤1.00	Mn ≤2.00	P ≤0.045	S ≤0.030	Cr 16.0-18.0	Ni 10.0-14.0	Nb	N	Ti	Mo 2.0-3.0
0064	EF1761	0.015	0.41	0.95	0.029	0.004	16.53	10.1				2.14

B.机械性能 Mechanical Property:

炉号 Heat No.		屈服强度Yield Strength(MPa) ≥205	拉伸强度 Tensile Strength(MPa) ≥515	延伸率 Elongation(%) ≥28	硬度 Hardness (HRC) ≤22	断面收缩率 Reduction of Area(Z%)	冲击试验 Charpy Impact(AK)
		$R_p0.2$	R_m	A50			
0064	EF1761	289	627	53	<20<20<20	/	/

C.检测及相关数据验证 Inspection and Related Data Verify

尺寸检查 Dimensional Check	ACC	晶间腐蚀 Corrosion Test ASTM A262 Practice E	ACC
表面检查 Surface Visual Inspection	ACC		
光谱分析 100%PMI	ACC		

D.备注Remarks:

ASME Code Sec II Part A2017 .NACE MR1075 resp. MR0103 ISO 15156 we hereby confirm that material is free of radioactivity contamination.La société Jndia garantit que tous les produits, objet du certificat susdit, respectent dans leur totalité les spécifications de l'article 15 de l'Arrelé.ministeriel du 24 Mars 1978, c'est à dire C<0.25% - P<0.05% S<0.05% - Rm<800 N/mm2 - Rm(A-2)10500 min. A% sur 5.65 V So.min 16% - E<0.9R; Melting Process：AOD、Cold forming

This Material (BW Fittings, HS Code 730723), is produced/molted by Zhejiang Jndia Pipeline Industry Co. Ltd. Steel Mill China and is 0100% Chinese Origin. Because mentioned HS Code is listed in EU Regulation 833/2014 Annex XVII and further amendment, we additionnally confirm that no material of Russian Origin has been used in the production of this product.

制单人：黄林飞 Prepared by: Huang Linfei

审 核 Reviewed by

日期：2024-04-10 Date

质检专用检验部门(章): Stamp

ROSETTI MARINO

Supply Management Dept.

☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 600 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: TEE RID. 10"x6" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: EF1761 - Qty:4,00

Protocol: CTCERC202400004849 * CERTIFIED TRUE COPY * Issued 30-05-2024

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

PTD 204334,JALAN PLATINUM UTAMA,

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZONE 12B, 81700 PASIR GUDANG

JOHOR DARUL TAKZIM, MALAYSIA

Tel: +607-2518888 Fax: +607-2519999 Website: www.pantechssalloy.com

http:// www.pantech-group.com

Certified to NSF/ANSI 61 — Approval No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO. : 0343/PED/MUM/1110006/I

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-48583

Date : 29 Feb 2024

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
806897	E000006235	ASTM A403/A403M - 22 / ASME SA 403/SA403M - 23	ASME B16.9 - 18 / ASTM A960/A960M - 23 / ASME SA 960/SA960M - 23 / ASME SECTION II PART A-2023	Solution Treated, Pickled-Passivated

Heat No.	Product & Size			Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
MN074-1	5"	SCH 10s	TEE	30	WP316/316L-S	PASSED	230204AE07-01
MN043-1	2" X 1"	SCH 10s	REDUCING TEE	150	WP316/316L-S	PASSED	221227AE05-01
MN094-1	4" X 2 1/2"	SCH 10s	REDUCING TEE	15	WP316/316L-S	PASSED	NY230412AT09
MN094-1	4" X 3"	SCH 10s	REDUCING TEE	50	WP316/316L-S	PASSED	NY230412AT09
MO070-1	6" X 3"	SCH 40s	REDUCING TEE	15	WP316/316L-S	PASSED	N230129AW16
X MN078-1	10" X 6"	SCH 10s	REDUCING TEE	10	WP316/316L-S	PASSED	221220BE13-01
MN081-1	2" X 1 1/4"	SCH 10s	CON-REDUCER	50	WP316/316L-S	PASSED	230310CE01-01
MN081-1	2" X 1 1/2"	SCH 10s	CON-REDUCER	300	WP316/316L-S	PASSED	230310CE01-01
JO030-1	2 1/2" X 1"	SCH 10s	CON-REDUCER	20	WP316/316L-S	PASSED	11Y467
INA002-01-103CR	3" X 1"	SCH 40s	CON-REDUCER	10	WP316/316L-S	PASSED	11W561

Specification	Chemical Composition (%)										Tensile Test *1			Hardness	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS (KSI / MPa)	TS	E (%)	(HRB)	
Max															
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-		-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
MN074-1	0.011	0.20	0.96	0.039	0.001	16.37	10.07	2.04	< 0.01		232	557	60	77	PASSED
MN043-1	0.013	0.23	0.97	0.037	0.001	16.24	10.11	2.04	< 0.01		251	551	50	69	PASSED
MN094-1	0.013	0.47	0.80	0.037	0.003	16.62	10.20	2.01	< 0.01		246	588	58	71	PASSED
MN094-1	0.013	0.47	0.80	0.037	0.003	16.62	10.20	2.01	< 0.01		246	588	58	71	PASSED
MO070-1	0.018	0.35	0.85	0.032	0.001	16.25	10.01	2.01	< 0.01		255	595	57	79	PASSED
MN078-1	0.011	0.24	0.96	0.036	0.001	16.50	10.04	2.00	< 0.01		220	535	56	76	PASSED
MN081-1	0.013	0.23	0.94	0.037	0.001	16.40	10.01	2.07	< 0.01		322	648	57	67	PASSED
MN081-1	0.013	0.23	0.94	0.037	0.001	16.40	10.01	2.07	< 0.01		322	648	57	67	PASSED
JO030-1	0.025	0.35	1.12	0.029	0.002	16.42	11.08	2.06	< 0.01		256	604	57	80	PASSED
INA002-01-103CR	0.017	0.36	1.19	0.034	0.002	16.44	11.14	2.14	< 0.01		252	555	55	75	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER; AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-22 STANDARD, SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE, LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD / VOD

PIPE RAW MATERIAL - WELDED BY ELECTRIC FUSION WELDING PROCESS WITH NO FILLER METAL

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-15 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

Pantech Stainless & Alloy Industries Sdn. Bhd.
200601013677 (733428-W)
PTD 204334, Jalan Platinum Utama,
Kawasan Perindustrian Pasir Gudang, Zon 12B,
81700 Pasir Gudang, Johor.
Tel: +607-251 8888 Fax: +607-251 9999

GENERAL MARKING FORMAT : NSF®-61 PANTECH S.A. [PRODUCT TYPE FOR LR/SR ONLY] [SIZE]" [THICKNESS] A/SA403 [GRADE] HEAT NO. [HEAT NO.] MALAYSIA

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN AND ASME SECTION II PART A - 2021 MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT

LA SOCIÉTÉ PANTECH STAINLESS STEEL & ALLOY GARANTIT QUE TOUS LES PRODUITS, OBJET DU CERTIFICAT SUSDIT, RESPECTENT DANS LEUR TOTALITÉ LES SPÉCIFICATIONS DE L'ARTICLE 15 DE L'ARRETÉ MINISTERIEL DU 24 MARS 1978, C'EST À DIRE C<0.25% - P<0.05% S<0.05% - RM<800 N/MM2 - RM(A-2) 10500 MIN. A% SUR 5.65 V SO MIN 16% - E<0.9R;

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

Head of Quality Assurance Department

Form :FQA-030b R.7; 30-01-2024

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 600 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: TEE RID. 10"x6" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: MN078-1 - Qty:1,00

Protocol: CTCERC202400004849 * CERTIFIED TRUE COPY * Issued 30-05-2024

ORIGINAL

PIPES & FITTINGS

TSS PIPES & FITTINGS INDUSTRY SDN. BHD.

No 5, Lorong IKS, Simpang Empat k,Taman IKS Simpang Empat, 14100 Simpang Ampat, Penang, Malaysia.

ISO 9001:2015 Cert. No.: 01 100 1733605 (1234978-K)
Directive 2014/68/EU Cert. No.: 01 202 CHN/Q-17 0606
AD 2000-Merkblatt WC Cert. No.: 01 202 CHN/Q-17 0606

CERTIFICATE OF CHEMICAL ANALYSIS ACC TO EN10204 3.1

L/C number : 0383018CD00001

Customer / Client								Certificate No.		20190316 -14		
Contract Nr.		TSS20181122			3532			Delivery Conditions		Solution Annealed, pickled and passivated		
Description		STAINLESS STEEL COLD FORMED BUTT WELD FITTINGS						Specification(s)		ASTM A403-18a/ ASME SA403-17 ASME B16.9-2012		
Item	Quantity	Size		Product Name				Grade		Heat No.	Heat treatment	Quenching
18	20	3"X1 1/2"	SCH10S	Reducing Tees				WP304/304L-S		160508V07	1050°C	RWQ
19	10	2"X3/4"	SCH40S	Eccentric Reducers				WP304/304L-S		161004S09	1050°C	RWQ
20	20	10"X6"	SCH10S	Reducing Tees				WP316/316L-S		N180725AV11	1050°C	RWQ
21	10	10"X8"	SCH10S	Reducing Tees				WP304/304L-S		160809W07	1050°C	RWQ
22	150	3/4"	SCH10S	90 Degree Elbows Long Radius				WP304/304L-S		151122V05	1050°C	RWQ

Chemical Composition (%)

Heat No.	C	Mn	P	S	Si	Cr	Ni	Mo				
160508V07	0.020	1.35	0.031	0.002	0.40	18.16	8.01					
161004S09	0.016	1.32	0.027	0.002	0.40	18.16	8.03					
N180725AV11	0.017	0.96	0.037	0.001	0.39	16.24	10.04	2.04				
160809W07	0.014	1.34	0.032	0.001	0.36	18.16	8.06					
151122V05	0.015	1.37	0.033	0.004	0.37	18.22	8.05					

Mechanical Properties					NACE MR0175	IC Test ASTM A262E	Impact Test	Non-destructive Test	100% PMI	Visual	Dimensional
Heat No.	TS(MPa)	YS Rp0.2%(MPa)	EL(%)	Hardness				RT			
160508V07	590	261	58	HRB≤90	OK	OK	N/A	N/A	OK	OK	OK
161004S09	575	250	52	HRB≤90	OK	OK	N/A	N/A	OK	OK	OK
N180725AV11	575	242	53	HRB≤90	OK	OK	N/A	N/A	OK	OK	OK
160809W07	590	261	58	HRB≤90	OK	OK	N/A	N/A	OK	OK	OK
151122V05	585	254	56	HRB≤90	OK	OK	N/A	N/A	OK	OK	OK

Product Marking:TSS SPECIFICATION CODE(ELBOW ONLY) GRADE NPS SCH HEAT NO. ***

1. Materials have been manufactured in complete accordance with the purchasers order
2. Free of weld repair as per ASTM A 960 Supplementary Requirement S66
3. Free of mercury
4. Free of radiation
5. 100% PMI test
6. Complies with NACE MR0103, NACE MR0175, ISO 15156

Signed: Q.A.Manager

TSS PIPES & FITTINGS INDUSTRY SDN. BHD. QA Department

Date: 16-Mar-19

ROSETTI MARINO
Supply Management Dept.
Business Review

Customer: ROSETTI MARINO S.p.A.
Description: TEE RID. 10"x6" SCH.10/S SEAMLESS
raccortubi Heat num. or Pcs. marking: N180725AV11 - Qty:2.00
Order: 1724000839 - 22.04.24 - Item n.: 600 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010
Protocol: CTCERC20240004849 * CERTIFIED TRUE COPY * Issued 30-05-2024

raccortubi Heat num. or Pos. marking: 151863 - Qty:6,00

Description: TEE RID. 6"x4" SCH.40S/10S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 620 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Protocol: CTCERC202400004849 * CERTIFIED TRUE COPY
* Issued 30-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5 - 29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452-887991 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Quality System Certified

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Réception Type: EN 10204 3.1

Cliente RACCORTUBI S.p.A.
Customer/Client

Ordine N. Master plan Ottobre 2013
P.O.N./Commande N.

Pos. N. 35 **Q.tà** 24
Item/Poste *Q.ty/Q.té*

(*) Marcatura e cert. N. 151863 **Data:** 07/10/13
Material Marking e Cert. N. *Date:*
Marquage du materiel

Descrizione RED.TEES 6"x4" SCH.40/S
Description
Description

Specifica FITTINGS TO ASTM A403/403M-12
Specification ASME SA403/SA403M ed.13 WP 316/316L
Spécification DIMS/ENDS ANSI ASME B16.9 ed.2012

Materiale base/*Raw material/Materiel du depart*
Fabbricante/*Manufacturer/Fabriquant:* TUBACEX Cert. No.: 578287

Specifica Specification/Specification	Caratteristiche meccaniche *Mechanical Properties/Caracteristiques Mechaniques*							
	Colata N. *Heat N.* *Coulée N.*	N. prova *Specimen N.* *Echantil. N.*	Snervamento *Yield strength* *Limite d'elasticité* N/mm²	Rottura *Tensile strength* *Resistance à la traction* N/mm²	Allungam. % *Elongation* *Allongement*	Durezza *Hardness as per NACE MR01-75*	Durezza *Hardness* *Dureté*	Resilienza *Impact energy* *Resilience* Joules
SMLS PIPES TO ASME/ASTM SA/A 312TP 316/316L, DIMS TO ANSI B36.19	47224	200100236	374	606	48	HRC<22		

Analisi chimica %/*Chemical composition/Composition chimique*

Colata N. *Heat N.* *Coulée N.*	C	Si	Mn	P	S	Cr	Ni	Mo	N					
47224	0,016	0,350	1,43	0,027	0,0010	16,85	11,25	2,16	0,0570					

Prove/*Tests/Tests*

Prova di corrosione A262 Prat. E: Conforme
Corrosion Test A262 Pract. E: In conformity
Essais de corrosion A262 Prat. E: En Conformité

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/*Remarks/Notes*

MATERIAL CONFORMS TO NACE MR0175/ISO 15156-1 LAST ED. AND MR 0103-ed.10
CERTIFIED ACC.TO PED 97/23/EC

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione/*Manufacture/Méthode de fabrication*

Formato a freddo *Cold formed* *Formés à froid* — **Senza saldatura** *Seamless* *Sans soudure*

Ispezione/*Inspection/inspéction*

- **Esame visivo e dimensionale: Buono**
  Visual and dimensional test: Satisfactory
  Examen visuel et dimensionel: Satisfaisant
- **Identificazione materiale: Buono**
  Positive Material Identification: Satisfactory
  Analyse de controle du produit: Satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1045°C
Solution Annealing at 1045°C, water quenching
Hypertrempés à 1045°C

Guaranteed caracteristics (A.M. du 24.03.78)
Caracteristiques garanties pour Z2CN18-10 et Z2CND17-13

C 0.25%	Rm 760 N/mm²
S 0.05%	Rm(A-2) 10500 N/mm²
P 0.05%	A% sur 5,65 So 16

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore/*Inspector/Inspecteur*

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☒ Review

raccortubi

00004902

30/05/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				FLANGE IN ACCIAIO CALMATO ASTM A-350 GRADO LF2	
1160	NR	4	0,00	Flange Blind diam.3/4" 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76572
1170	NR	12	0,00	Flange Blind diam.1" 150LB RF ASTM/ASME A/SA350 Gr.LF2	21/74246
1180	NR	4	0,00	Flange WN diam.2" Thk.5.54mm 300LB RF ASTM/ASME A/SA350 Gr.LF2	22/78189
1190	NR	6	0,00	Flange WN diam.2" Thk.5.54mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70486
1200	NR	4	0,00	Flange WN diam.1/2" Thk.3.73mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/75635
1210	NR	12	0,00	Flange WN diam.3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335
1220	NR	55	0,00	Flange WN diam.1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335
1230	NR	12	0,00	Flange WN diam.1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569
1240	NR	4	0,00	Flange WN diam.1" Thk.4.55mm 300LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569

raccortubi

00004902

30/05/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
1250	NR	5	0,00	Flange WN diam.1" Thk.4,55mm 150LB FF ASTM/ASME A/SA350 Gr.LF2	23/70335

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — Nr A03 2024-C_MFF-01243 — Data / Dated 20.05.2024 Z02

RACCORTUBI S.P.A. A06 Viale De Gasperi, 194 20010 MARCALLO CON CASONE MI IT	**Ordine / PO**	5826 A07
	Item	001 A07
	DDT / Delivery note	2024-3E301-0001221 A10
	Packing List	2024-3E401-0001229 A11
	Fattura / Invoice	2024-3E401-0001229 A12
	Ns. rif. / Our ref.	2024-3E201-0000800-0001 A08

Dest. RACCORTUBI SPA A08
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata B07 Heat Code	Nr. colata B07 Heat Nr	Quantità B08 Quantity	Descrizione B01 - (B09 - B11) Description
	22/76572	4,00	BLIND 150 RF 3/4" LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED ACC. ASTM E709 :SEE REPORT No: 030/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,180	0,210	1,020	0,009	0,015	0,120	0,060	0,020	0,022	0,150	0,003	0,001	0,010
PRODUCT ANALYSIS	0,183	0,211	1,023	0,010	0,014	0,122	0,063	0,022	0,023	0,151	0,004	0,002	0,012
	Al								CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,028								0,393	0,350	0,353	0,140	--
PRODUCT ANALYSIS	0,030								0,397	0,354	0,362	0,144	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta C10 Test specimen Sez/Sect mm2	Gauge L.mm	Forma C10 Shape 1=O - 2=□	°C C03	Snervamento>0,2% C11 Yield Strength>0,2% MPa	Snervamento>1,0% C11 Yield Strength>1,0% MPa	Rottura C12 Tensile MPa	Allungamento C13 Elongation %	Contrazione C14 Reduction of area %
126,60	50,80	1	20	329,0	--	524,0	31,4	59,8

DUREZZA / HARDNESS C30

HBW C31	Tipo/Type C40	RESILIENZA / IMPACT TEST Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
155,0 ; 159,0	KV	10x10x55 mm	-46	61	58	64	61,0

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. B08 Marking in acc. to	ANSI/MSS SP-25-2018	D01 Vis. & Dim.	SATISFACTORY	Origine B16 Origin of Steel	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

ROSETTI MARINO
Supply Management Dept.
Witness Review

UFFICIO CONTROLLO QUALITA' A05 QUALITY CONTROL DEPARTMENT	ENTE UFFICIALE DI COLLAUDO Z03 INSPECTION AUTHORITY	MARCHIO PRODUZIONE A04 MANUFACTURER'S SYMBOL
D. Gaffuri		MFF

MIM30800 del 29/08/2023

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1160 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange Blind diam.3/4" 150LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 22/76572 - Qty:4,00 Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY * Issued 24-05-2024

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	030/2024	Date	16/05/2024	Customer	RACCORTUBI S.P.A.	Order no.	5826
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Gaffuri Dario	Note	

Procedure / Standard	ASTM E709	Acceptance	ASME VIII DIV. 1 APPENDIX 6	Temperature	15°C

Yoke Type				Type and Trade Equipment						Magnetic Particles Type	
C.C.		C.A.	X	Silver Yoke NDT Italiana Serial no. 1822		Y-2 Yoke Magnaflux Serial no. E3313	X	Y-8 Yoke Magnaflux Serial no. 2440		Wet Fluorescent Magnetic Particles	Illumination Type
										NDT Italiana Elite FW1	Led UV Lamp Magnaflux Serial no. E3512
Note											

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined 100%	Results		Note
							C[1]	NC[1]	
	001	BL 150 RF 3/4"	22/76572	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	002	BL 150 RF 1"	21/74246	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	003	WN 300 RF 2" XS	22/78189	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	004	WN 150 RF 2" XS	23/70486	6	WHOLE ACCESSIBLE SURFACE	6	X		No indications detected
	005	WN 150 RF 1/2" XS	22/75635	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	006	WN 150 RF 3/4" XS	23/70335	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	007	WN 150 RF 1" XS	23/70335	55	WHOLE ACCESSIBLE SURFACE	55	X		No indications detected
	008	WN 150 RF 1" 1/2 XS	22/76569	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	009	WN 300 RF 1" XS	22/76569	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	010	WN 150 FF 1" XS	23/70335	5	WHOLE ACCESSIBLE SURFACE	5	X		No indications detected

ROSETTI MARINO
Supply Management Dept
Witness ☑ Review

1: C = Compilant - NC = Non Compilant

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Image / Photo	
Note	Flanges bores and other surfaces were inspected in both directions, axial & circumeferential in accordance with ASTM E709.

Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfarlab.com	Customer Inspector	ROSETTI MARINO Supply Management Dept. ☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1160 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange Blind diam.3/4" 150LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 22/76572 - Qty:4,00

Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY * Issued 24-05-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — Nr A03 2024-C_MFF-01243 — Data / Dated 20.05.2024 Z02

RACCORTUBI S.P.A. A06 Viale De Gasperi, 194 20010 MARCALLO CON CASONE MI IT	**Ordine / PO**	5826 A07
	Item	002 A07
	DDT / Delivery note	2024-3E301-0001221 A10
	Packing List	2024-3E401-0001229 A11
	Fattura / Invoice	2024-3E401-0001229 A12
	Ns. rif. / Our ref.	2024-3E201-0000800-0002 A08

Dest. RACCORTUBI SPA A08
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	21/74246	12,00	BLIND 150 RF 1" LF2CL1

Mat. in acc. a / Mat. in acc. to B02
ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03
FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED ACC. ASTM E709 :SEE REPORT No: 030/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,190	0,200	1,050	0,005	0,008	0,100	0,070	0,010	0,018	0,140	0,002	0,001	0,009
PRODUCT ANALYSIS	0,192	0,197	1,045	0,007	0,006	0,103	0,074	0,012	0,019	0,143	0,002	0,002	0,009

	Al	CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,026	0,401	0,365	0,322	0,110	–
PRODUCT ANALYSIS	0,030	0,404	0,366	0,334	0,115	–

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta / Test specimen C10		Forma / Shape C15	°C C03	Snervamento>0,2% / Yield Strength>0,2% C11	Snervamento>1,0% / Yield Strength>1,0% C11	Rottura / Tensile C12	Allungamento / Elongation C13	Contrazione / Reduction of area C14
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
126,60	50,80	1	20	411,0	--	561,0	26,9	62,9

DUREZZA / HARDNESS C30

HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
166,0 ; 169,0	KV	10x10x55 mm	-46	35	37	45	39,0

RESILIENZA / IMPACT TEST

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. / Marking in acc. to B06	ANSI/MSS SP-25-2018	Vis. & Dim. D01	SATISFACTORY	Origine / Origin of Steel B16	ITALY EUROPEAN UNION

Note / Notes Z01-B03
MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

ROSETTI MARINO

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D. Gaffuri		MFF

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	030/2024	Date	16/05/2024	Customer	RACCORTUBI S.P.A.	Order no.	5826
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Galfuri Dario	Note	

Procedure / Standard	ASTM E709	Acceptance	ASME VIII DIV. 1 APPENDIX 6

Temperature	15°C

Yoke Type				Type and Trade Equipment						Magnetic Particles Type	
C.C.		C.A.	X	Sliver Yoke NDT Italiana Serial no. 1822		Y-2 Yoke Magnaflux Serial no. E3313	X	Y-8 Yoke Magnaflux Serial no. 2440		Wet Fluorescent Magnetic Particles	Illumination Type
										NDT Italiana Elite FW1	Led UV Lamp Magnaflux Serial no. E3512
Note											

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined 100%	Results		Note
							C[1]	NC[1]	
	001	BL 150 RF 3/4"	22/76572	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	002	BL 150 RF 1"	21/74246	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	003	WN 300 RF 2" XS	22/78189	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	004	WN 150 RF 2" XS	23/70486	6	WHOLE ACCESSIBLE SURFACE	6	X		No indications detected
	005	WN 150 RF 1/2" XS	22/75635	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	006	WN 150 RF 3/4" XS	23/70335	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	007	WN 150 RF 1" XS	23/70335	55	WHOLE ACCESSIBLE SURFACE	55	X		No indications detected
	008	WN 150 RF 1" 1/2 XS	22/76569	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	009	WN 300 RF 1" XS	22/76569	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	010	WN 150 FF 1" XS	23/70335	5	WHOLE ACCESSIBLE SURFACE	5	X		No indications detected

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Image / Photo	
Note	Flanges bores and other surfaces were inspected in both directions, axial & circumeferential in accordance with ASTM E709.

Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfarlab.com	Customer Inspector	ROSETTI MARINO Supply Management Dept

☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange Blind diam.1" 150LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 21/74246 - Qty:12,00

Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY
* Issued 24-05-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — Nr A03 2024-C_MFF-01243 — Data / Dated 20.05.2024 Z02

RACCORTUBI S.P.A. A06 Viale De Gasperi, 194 20010 MARCALLO CON CASONE MI IT	**Ordine / PO**	5826	A07
	Item	003	A07
	DDT / Delivery note	2024-3E301-0001221	A10
	Packing List	2024-3E401-0001229	A11
	Fattura / Invoice	2024-3E401-0001229	A12
	Ns. rif. / Our ref.	2024-3E201-0000800-0003	A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata B07 Heat Code	Nr. colata B07 Heat Nr	Quantità B08 Quantity	Descrizione B01 - (B09 - B11) Description
	22/78189	4,00	W/N 300 RF 2" XS LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED ACC. ASTM E709 :SEE REPORT No: 030/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,180	0,190	1,060	0,010	0,011	0,120	0,060	0,020	0,018	0,160	0,002	0,002	0,010
PRODUCT ANALYSIS	0,183	0,195	1,068	0,007	0,007	0,111	0,072	0,023	0,020	0,166	0,001	0,003	0,007

	Al	CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,026	0,400	0,357	0,362	0,140	--
PRODUCT ANALYSIS	0,034	0,404	0,361	0,373	0,134	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta C10 Test specimen Sez/Sect mm2	Gauge L.mm	Forma C10 Shape 1=O - 2=□	°C C03	Snervamento>0,2% C11 Yield Strength>0,2% MPa	Snervamento>1,0% C11 Yield Strength>1,0% MPa	Rottura C12 Tensile MPa	Allungamento C13 Elongation %	Contrazione C14 Reduction of area %
126,60	50,80	1	20	324,0	--	510,0	36,4	65,3

DUREZZA / HARDNESS C30 HBW C31	RESILIENZA / IMPACT TEST Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
149,0 ; 151,0	KV	10X10X55 mm	-46	58	67	61	62,0

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020 ; ASME/ANSI B36.10M -2022		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. B06 Marking in acc. to	ANSI/MSS SP-25-2018	D01 Vis. & Dim.	SATISFACTORY	Origine B16 Origin of Steel	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION
Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

UFFICIO CONTROLLO QUALITA' A05 QUALITY CONTROL DEPARTMENT	ENTE UFFICIALE DI COLLAUDO Z03 INSPECTION AUTHORITY	MARCHIO PRODUZIONE A04 MANUFACTURER'S SYMBOL
D. Gaffuri		MFF

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	030/2024	Date	16/05/2024	Customer	RACCORTUBI S.P.A.	Order no.	5826
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Galfuri Dario	Note	

Procedure / Standard	ASTM E709	Acceptance	ASME VIII DIV. 1 APPENDIX 6

Temperature	15°C

Yoke Type				Type and Trade Equipment						Magnetic Particles Type	
C.C.		C.A.	X	Silver Yoke NDT Italiana Serial no. 1822		Y-2 Yoke Magnaflux Serial no. E3313	X	Y-8 Yoke Magnaflux Serial no. 2440		Wet Fluorescent Magnetic Particles	Illumination Type
										NDT Italiana Elite FW1	Led UV Lamp Magnaflux Serial no. E3512
Note											

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined 100%	Results		Note
							C[1]	NC[1]	
	001	BL 150 RF 3/4"	22/76572	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	002	BL 150 RF 1"	21/74246	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	003	WN 300 RF 2" XS	22/78189	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	004	WN 150 RF 2" XS	23/70486	6	WHOLE ACCESSIBLE SURFACE	6	X		No indications detected
	005	WN 150 RF 1/2" XS	22/75635	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	006	WN 150 RF 3/4" XS	23/70335	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	007	WN 150 RF 1" XS	23/70335	55	WHOLE ACCESSIBLE SURFACE	55	X		No indications detected
	008	WN 150 RF 1" 1/2 XS	22/76569	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	009	WN 300 RF 1" XS	22/76569	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	010	WN 150 FF 1" XS	23/70335	5	WHOLE ACCESSIBLE SURFACE	5	X		No indications detected

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

A FARINA COMPANY	**CERTIFICATO ESAME MAGNETICO**	MIM22800 REV.00 27/02/2023 QAM Luca Frigerio

Image / Photo	
Note	Flanges bores and other surfaces were inspected in both directions, axial & circumeferential in accordance with ASTM E709.

Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfaritaly.com	Customer Inspector	ROSETTI MARINO Supply Management Dept. ☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1180 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.2" Thk.5.54mm 300LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 22/78189 - Qty:4,00

Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY * Issued 24-05-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — **Nr** A03 2024-C_MFF-01243 — **Data / Dated** 20.05.2024 Z02

RACCORTUBI S.P.A. A06		**Ordine / PO**	5826 A07
Viale De Gasperi, 194		**Item**	004 A07
20010 MARCALLO CON CASONE MI IT		**DDT / Delivery note**	2024-3E301-0001221 A10
		Packing List	2024-3E401-0001229 A11
		Fattura / Invoice	2024-3E401-0001229 A12
		Ns. rif. / Our ref.	2024-3E201-0000800-0004 A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata B07 Heat Code	Nr. colata B07 Heat Nr	Quantità B08 Quantity	Descrizione B01 - (B09 - B11) Description
	23/70486	6,00	W/N 150 RF 2" XS LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED ACC. ASTM E709 :SEE REPORT No: 030/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,200	0,190	1,000	0,005	0,009	0,100	0,070	0,010	0,018	0,200	0,002	0,001	0,010
PRODUCT ANALYSIS	0,197	0,195	1,018	0,007	0,011	0,106	0,067	0,012	0,016	0,197	0,003	0,002	0,010
	Al								CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,025								0,407	0,367	0,382	0,110	--
PRODUCT ANALYSIS	0,027								0,408	0,367	0,385	0,118	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta C10 Test specimen Sez/Sect mm2	Gauge L.mm	Forma C10 Shape 1=O - 2=□	°C C03	Snervamento>0,2% C11 Yield Strength>0,2% MPa	Snervamento>1,0% C11 Yield Strength>1,0% MPa	Rottura C12 Tensile MPa	Allungamento C13 Elongation %	Contrazione C14 Reduction of area %
126,60	50,80	1	20	390,0	--	548,0	31,3	72,4

DUREZZA / HARDNESS C30 HBW C31	RESILIENZA / IMPACT TEST Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
166,0 ; 173,0	KV	10x10x55 mm	-46	125	126	140	130,3

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020 ; ASME/ANSI B36.10M -2022		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. B06 Marking in acc. to	ANSI/MSS SP-25-2018	D01 Vis. & Dim.	SATISFACTORY	Origine B16 Origin of Steel	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

UFFICIO CONTROLLO QUALITA' A05 QUALITY CONTROL DEPARTMENT	ENTE UFFICIALE DI COLLAUDO Z03 INSPECTION AUTHORITY	MARCHIO PRODUZIONE A04 MANUFACTURER'S SYMBOL
D. Gaffuri		MFF

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	030/2024	Date	16/05/2024	Customer	RACCORTUBI S.P.A.	Order no.	5826
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Galfuri Dario	Note	

Procedure / Standard	ASTM E709	Acceptance	ASME VIII DIV. 1 APPENDIX 6	Temperature	15°C

Yoke Type				Type and Trade Equipment						Magnetic Particles Type	
C.C.		C.A.	X	Silver Yoke NDT Italiana Serial no. 1822		Y-2 Yoke Magnaflux Serial no. E3313	X	Y-8 Yoke Magnaflux Serial no. 2440		Wet Fluorescent Magnetic Particles	Illumination Type
										NDT Italiana Elite FW1	Led UV Lamp Magnaflux Serial no. E3512
Note											

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined 100%	Results		Note
							C[1]	NC[1]	
	001	BL 150 RF 3/4"	22/76572	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	002	BL 150 RF 1"	21/74246	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	003	WN 300 RF 2" XS	22/78189	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	004	WN 150 RF 2" XS	23/70486	6	WHOLE ACCESSIBLE SURFACE	6	X		No indications detected
	005	WN 150 RF 1/2" XS	22/75635	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	006	WN 150 RF 3/4" XS	23/70335	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	007	WN 150 RF 1" XS	23/70335	55	WHOLE ACCESSIBLE SURFACE	55	X		No indications detected
	008	WN 150 RF 1" 1/2 XS	22/76569	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	009	WN 300 RF 1" XS	22/76569	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	010	WN 150 FF 1" XS	23/70335	5	WHOLE ACCESSIBLE SURFACE	5	X		No indications detected

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1190 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.2" Thk.5.54mm 150LB RF ASTM/ASME A/SA350 Gr.LF2

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Image / Photo	
Note	Flanges bores and other surfaces were inspected in both directions, axial & circumeferential in accordance with ASTM E709.

Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfarltaly.com	Customer Inspector	ROSETTI MARINO Supply Management Dept. ☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1190 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.2" Thk.5.54mm 150LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 23/70486 - Qty:6,00

Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY * Issued 24-05-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — **Nr** A03 2024-C_MFF-01243 — **Data / Dated** 20.05.2024 Z02

RACCORTUBI S.P.A. A06		**Ordine / PO**	5826 A07
Viale De Gasperi, 194		**Item**	005 A07
20010 MARCALLO CON CASONE MI IT		**DDT / Delivery note**	2024-3E301-0001221 A10
		Packing List	2024-3E401-0001229 A11
		Fattura / Invoice	2024-3E401-0001229 A12
		Ns. rif. / Our ref.	2024-3E201-0000800-0005 A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	22/75635	4,00	W/N 150 RF 1/2" XS LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED ACC. ASTM E709 :SEE REPORT No: 030/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,180	0,210	1,010	0,010	0,013	0,180	0,080	0,020	0,023	0,200	0,002	0,001	0,009
PRODUCT ANALYSIS	0,183	0,216	1,002	0,007	0,009	0,186	0,071	0,018	0,021	0,193	0,003	0,003	0,006
	Al								CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,029								0,407	0,348	0,482	0,200	–
PRODUCT ANALYSIS	0,034								0,409	0,350	0,471	0,204	–

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta / Test specimen C10		Forma / Shape C10	°C C03	Snervamento>0,2% / Yield Strength>0,2% C11	Snervamento>1,0% / Yield Strength>1,0% C11	Rottura / Tensile C12	Allungamento / Elongation C13	Contrazione / Reduction of area C14
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
126,60	50,80	1	20	339,0	–	536,0	28,4	62,8

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST					
HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
153,0 ; 157,0	KV	10x10x55 mm	-46	38	42	53	44,3

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020 ; ASME/ANSI B36.10M -2022		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. / Marking in acc. to B06	ANSI/MSS SP-25-2018	Vis. & Dim. D01	SATISFACTORY	Origine / Origin of Steel B16	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D.Gaffuri		MFF

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	030/2024	Date	16/05/2024	Customer	RACCORTUBI S.P.A.	Order no.	5826
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Galfuri Dario	Note	

Procedure / Standard	ASTM E709	Acceptance	ASME VIII DIV. 1 APPENDIX 6

Temperature	15°C

Yoke Type				Type and Trade Equipment						Magnetic Particles Type	
C.C.		C.A.	X	Silver Yoke NDT Italiana Serial no. 1822		Y-2 Yoke Magnaflux Serial no. E3313	X	Y-8 Yoke Magnaflux Serial no. 2440		Wet Fluorescent Magnetic Particles	Illumination Type
										NDT Italiana Elite FW1	Led UV Lamp Magnaflux Serial no. E3512
Note											

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined 100%	Results		Note
							C[1]	NC[1]	
	001	BL 150 RF 3/4"	22/76572	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	002	BL 150 RF 1"	21/74246	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	003	WN 300 RF 2" XS	22/78189	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	004	WN 150 RF 2" XS	23/70486	6	WHOLE ACCESSIBLE SURFACE	6	X		No indications detected
	005	WN 150 RF 1/2" XS	22/75635	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	006	WN 150 RF 3/4" XS	23/70335	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	007	WN 150 RF 1" XS	23/70335	55	WHOLE ACCESSIBLE SURFACE	55	X		No indications detected
	008	WN 150 RF 1" 1/2 XS	22/76569	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	009	WN 300 RF 1" XS	22/76569	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	010	WN 150 FF 1" XS	23/70335	5	WHOLE ACCESSIBLE SURFACE	5	X		No indications detected

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Image / Photo	
Note	Flanges bores and other surfaces were inspected in both directions, axial & circumeferential in accordance with ASTM E709.

Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfarltalystem	Customer Inspector	ROSETTI MARINO Supply Management Dept. ☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1200 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.1/2" Thk.3.73mm 150LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 22/75635 - Qty:4,00

Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY * Issued 24-05-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — **Nr** A03 2024-C_MFF-01243 — **Data / Dated** 20.05.2024 Z02

RACCORTUBI S.P.A. A06		**Ordine / PO**	5826 A07
Viale De Gasperi, 194		**Item**	006 A07
20010 MARCALLO CON CASONE MI IT		**DDT / Delivery note**	2024-3E301-0001221 A10
		Packing List	2024-3E401-0001229 A11
		Fattura / Invoice	2024-3E401-0001229 A12
		Ns. rif. / Our ref.	2024-3E201-0000800-0006 A08

Dest. **RACCORTUBI SPA** A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	23/70335	12,00	W/N 150 RF 3/4" XS LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED ACC. ASTM E709 :SEE REPORT No: 030/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,180	0,230	1,000	0,009	0,012	0,140	0,110	0,020	0,019	0,200	0,002	0,002	0,010
PRODUCT ANALYSIS	0,182	0,235	1,002	0,010	0,009	0,144	0,106	0,018	0,020	0,196	0,003	0,002	0,011
	Al								CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,026								0,400	0,347	0,472	0,160	--
PRODUCT ANALYSIS	0,025								0,402	0,349	0,467	0,162	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta C10 / Test specimen		Forma C10 / Shape	°C C03	Snervamento>0,2% C11 / Yield Strength>0,2%	Snervamento>1,0% C11 / Yield Strength>1,0%	Rottura C12 / Tensile	Allungamento C13 / Elongation	Contrazione C14 / Reduction of area
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
126,60	50,80	1	20	350,0	--	545,0	30,3	65,4

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST					
HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
160,0 ; 163,0	KV	10x10x55 mm	-46	52	35	72	53,0

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020 ; ASME/ANSI B36.10M -2022		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. B06 / Marking in acc. to	ANSI/MSS SP-25-2018	Vis. & Dim. D01	SATISFACTORY	Origine B16 / Origin of Steel	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D. Gaffuri		MFF

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	030/2024	Date	16/05/2024	Customer	RACCORTUBI S.P.A.	Order no.	5826
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Gaffuri Dario	Note	

Procedure / Standard	ASTM E709	Acceptance	ASME VIII DIV. 1 APPENDIX 6	Temperature	15°C

Yoke Type				Type and Trade Equipment						Magnetic Particles Type	
C.C.		C.A.	X	Silver Yoke NDT Italiana Serial no. 1822		Y-2 Yoke Magnaflux Serial no. E3313	X	Y-8 Yoke Magnaflux Serial no. 2440		Wet Fluorescent Magnetic Particles	Illumination Type
										NDT Italiana Elite FW1	Led UV Lamp Magnaflux Serial no. E3512
Note											

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined 100%	Results		Note
							C[1]	NC[1]	
	001	BL 150 RF 3/4"	22/76572	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	002	BL 150 RF 1"	21/74246	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	003	WN 300 RF 2" XS	22/78189	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	004	WN 150 RF 2" XS	23/70486	6	WHOLE ACCESSIBLE SURFACE	6	X		No indications detected
	005	WN 150 RF 1/2" XS	22/75635	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	006	WN 150 RF 3/4" XS	23/70335	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	007	WN 150 RF 1" XS	23/70335	55	WHOLE ACCESSIBLE SURFACE	55	X		No indications detected
	008	WN 150 RF 1" 1/2 XS	22/76569	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	009	WN 300 RF 1" XS	22/76569	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	010	WN 150 FF 1" XS	23/70335	5	WHOLE ACCESSIBLE SURFACE	5	X		No indications detected

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1210 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Image / Photo	
Note	Flanges bores and other surfaces were inspected in both directions, axial & circumeferential in accordance with ASTM E709.

Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfaritaly.com	Customer Inspector	ROSETTI MARINO Supply Management Dept. ☐ Witness ☒ Review

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1210 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 23/70335 - Qty:12,00

Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY * Issued 24-05-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 656441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — **Nr** A03 2024-C_MFF-01243 — **Data / Dated** 20.05.2024 Z02

RACCORTUBI S.P.A. A06		**Ordine / PO**	5826 A07
Viale De Gasperi, 194		**Item**	007 A07
20010 MARCALLO CON CASONE MI IT		**DDT / Delivery note**	2024-3E301-0001221 A10
		Packing List	2024-3E401-0001229 A11
		Fattura / Invoice	2024-3E401-0001229 A12
		Ns. rif. / Our ref.	2024-3E201-0000800-0007 A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata B07 Heat Code	Nr. colata B07 Heat Nr	Quantità B08 Quantity	Descrizione B01 - (B09 - B11) Description
	23/70335	55,00	W/N 150 RF 1" XS LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED ACC. ASTM E709 :SEE REPORT No: 030/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,180	0,230	1,000	0,009	0,012	0,140	0,110	0,020	0,019	0,200	0,002	0,002	0,010
PRODUCT ANALYSIS	0,182	0,235	1,002	0,010	0,009	0,144	0,106	0,018	0,020	0,196	0,003	0,002	0,011

	Al	CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,026	0,400	0,347	0,472	0,160	–
PRODUCT ANALYSIS	0,025	0,402	0,349	0,467	0,162	–

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta C10 Test specimen Sez/Sect mm2	Gauge L.mm	Forma C10 Shape 1=O - 2=□	°C C03	Snervamento>0,2% C11 Yield Strength>0,2% MPa	Snervamento>1,0% C11 Yield Strength>1,0% MPa	Rottura C12 Tensile MPa	Allungamento C13 Elongation %	Contrazione C14 Reduction of area %
126,60	50,80	1	20	350,0	–	545,0	30,3	65,4

DUREZZA / HARDNESS C30 HBW C31	RESILIENZA / IMPACT TEST Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
160,0 ; 163,0	KV	10x10x55 mm	-46	52	35	72	53,0

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020 ; ASME/ANSI B36.10M -2022		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. B08 Marking in acc. to	ANSI/MSS SP-25-2018	Vis. & Dim. D01	SATISFACTORY	Origine B16 Origin of Steel	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

UFFICIO CONTROLLO QUALITA' A05 QUALITY CONTROL DEPARTMENT	ENTE UFFICIALE DI COLLAUDO Z03 INSPECTION AUTHORITY	MARCHIO PRODUZIONE A04 MANUFACTURER'S SYMBOL
D. Gaffuri		MFF

MIM30800 del 29/08/2023

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1220 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 23/70335 - Qty:55,00

Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY * Issued 24-05-2024

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	030/2024	Date	16/05/2024	Customer	RACCORTUBI S.P.A.	Order no.	5826
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Galfuri Dario	Note	

Procedure / Standard	ASTM E709	Acceptance	ASME VIII DIV. 1 APPENDIX 6

Temperature	15°C

Yoke Type				Type and Trade Equipment						Magnetic Particles Type	
C.C.		C.A.	X	Silver Yoke NDT Italiana Serial no. 1822		Y-2 Yoke Magnaflux Serial no. E3313	X	Y-8 Yoke Magnaflux Serial no. 2440		Wet Fluorescent Magnetic Particles	Illumination Type
										NDT Italiana Elite FW1	Led UV Lamp Magnaflux Serial no. E3512
Note											

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined 100%	Results		Note
							C[1]	NC[1]	
	001	BL 150 RF 3/4"	22/76572	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	002	BL 150 RF 1"	21/74246	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	003	WN 300 RF 2" XS	22/78189	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	004	WN 150 RF 2" XS	23/70486	6	WHOLE ACCESSIBLE SURFACE	6	X		No indications detected
	005	WN 150 RF 1/2" XS	22/75635	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	006	WN 150 RF 3/4" XS	23/70335	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	007	WN 150 RF 1" XS	23/70335	55	WHOLE ACCESSIBLE SURFACE	55	X		No indications detected
	008	WN 150 RF 1" 1/2 XS	22/76569	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	009	WN 300 RF 1" XS	22/76569	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	010	WN 150 FF 1" XS	23/70335	5	WHOLE ACCESSIBLE SURFACE	5	X		No indications detected

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Image / Photo	
Note	Flanges bores and other surfaces were inspected in both directions, axial & circumeferential in accordance with ASTM E709.

Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfarlab.com	Customer Inspector	ROSETTI MARINO Supply Management Dept. ☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1220 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 23/70335 - Qty:55,00

Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY
* Issued 24-05-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — **Nr** A03 2024-C_MFF-01243 — **Data / Dated** 20.05.2024 Z02

RACCORTUBI S.P.A. A06		**Ordine / PO**	5826 A07
Viale De Gasperi, 194		**Item**	008 A07
20010 MARCALLO CON CASONE MI IT		**DDT / Delivery note**	2024-3E301-0001221 A10
		Packing List	2024-3E401-0001229 A11
		Fattura / Invoice	2024-3E401-0001229 A12
		Ns. rif. / Our ref.	2024-3E201-0000800-0008 A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	22/76569	12,00	W/N 150 RF 1.1/2" XS LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED ACC. ASTM E709 :SEE REPORT No: 030/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,180	0,210	1,040	0,009	0,014	0,120	0,060	0,020	0,021	0,160	0,002	0,001	0,010
PRODUCT ANALYSIS	0,181	0,214	1,043	0,008	0,015	0,123	0,058	0,023	0,025	0,159	0,004	0,003	0,013
	Al								CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,025								0,396	0,353	0,362	0,140	--
PRODUCT ANALYSIS	0,026								0,399	0,355	0,367	0,146	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta / Test specimen C10		Forma / Shape C10	°C C03	Snervamento>0,2% / Yield Strength>0,2% C11	Snervamento>1,0% / Yield Strength>1,0% C11	Rottura / Tensile C12	Allungamento / Elongation C13	Contrazione / Reduction of area C14
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
126,60	50,80	1	20	328,0	--	515,0	30,8	58,5

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST					
HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
153,0 ; 157,0	KV	10x10x55 mm	-46	55	59	54	56,0

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020 ; ASME/ANSI B36.10M -2022		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. / Marking in acc. to B06	ANSI/MSS SP-25-2018	Vis. & Dim. D01	SATISFACTORY	Origine / Origin of Steel B16	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

ROSETTI MARINO
Suoply Management Dept.
Witness ☑ Review

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D.Gaffuri		MFF

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1230 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 22/76569 - Qty:12,00 Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY * Issued 24-05-2024

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	030/2024	Date	16/05/2024	Customer	RACCORTUBI S.P.A.	Order no.	5826
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Galluri Dario	Note	

Procedure / Standard	ASTM E709	Acceptance	ASME VIII DIV. 1 APPENDIX 6

Temperature	15°C

Yoke Type				Type and Trade Equipment						Magnetic Particles Type	
C.C.		C.A.	X	Silver Yoke NDT Italiana Serial no. 1822		Y-2 Yoke Magnaflux Serial no. E3313	X	Y-8 Yoke Magnaflux Serial no. 2440		Wet Fluorescent Magnetic Particles	Illumination Type
										NDT Italiana Elite FW1	Led UV Lamp Magnaflux Serial no. E3512
Note											

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined 100%	Results		Note
							C[1]	NC[1]	
	001	BL 150 RF 3/4"	22/76572	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	002	BL 150 RF 1"	21/74246	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	003	WN 300 RF 2" XS	22/78189	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	004	WN 150 RF 2" XS	23/70486	6	WHOLE ACCESSIBLE SURFACE	6	X		No indications detected
	005	WN 150 RF 1/2" XS	22/75635	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	006	WN 150 RF 3/4" XS	23/70335	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	007	WN 150 RF 1" XS	23/70335	55	WHOLE ACCESSIBLE SURFACE	55	X		No indications detected
	008	WN 150 RF 1" 1/2 XS	22/76569	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	009	WN 300 RF 1" XS	22/76569	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	010	WN 150 FF 1" XS	23/70335	5	WHOLE ACCESSIBLE SURFACE	5	X		No indications detected

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1230 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Image / Photo	
Note	Flanges bores and other surfaces were inspected in both directions, axial & circumeferential in accordance with ASTM E709.

Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfarltaly.com	Customer Inspector	ROSETTI MARINO Supply Management Dept ☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1230 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 22/76569 - Qty:12,00

Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY * Issued 24-05-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — **Nr** A03 2024-C_MFF-01243 — **Data / Dated** 20.05.2024 Z02

RACCORTUBI S.P.A. A06		**Ordine / PO**	5826 A07
Viale De Gasperi, 194		**Item**	009 A07
20010 MARCALLO CON CASONE MI IT		**DDT / Delivery note**	2024-3E301-0001221 A10
		Packing List	2024-3E401-0001229 A11
		Fattura / Invoice	2024-3E401-0001229 A12
		Ns. rif. / Our ref.	2024-3E201-0000800-0009 A08

Dest. **RACCORTUBI SPA** A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata B07 Heat Code	Nr. colata B07 Heat Nr	Quantità B08 Quantity	Descrizione B01 - (B09 - B11) Description
	22/76569	4,00	W/N 300 RF 1" XS LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED ACC. ASTM E709 :SEE REPORT No: 030/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,180	0,210	1,040	0,009	0,014	0,120	0,060	0,020	0,021	0,160	0,002	0,001	0,010
PRODUCT ANALYSIS	0,181	0,214	1,043	0,008	0,015	0,123	0,058	0,023	0,025	0,159	0,004	0,003	0,013
	Al								CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,025								0,396	0,353	0,362	0,140	–
PRODUCT ANALYSIS	0,026								0,399	0,355	0,367	0,146	–

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta C10 Test specimen		Forma C10 Shape	°C C03	Snervamento>0,2% C11 Yield Strength>0,2%	Snervamento>1,0% C11 Yield Strength>1,0%	Rottura C12 Tensile	Allungamento C13 Elongation	Contrazione C14 Reduction of area
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
126,60	50,80	1	20	328,0	–	515,0	30,8	58,5

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST					
HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
153,0 ; 157,0	KV	10x10x55 mm	-46	55	59	54	56,0

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020 ; ASME/ANSI B36.10M -2022		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. B06 Marking in acc. to	ANSI/MSS SP-25-2018	D01 Vis. & Dim.	SATISFACTORY	Origine B16 Origin of Steel	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

UFFICIO CONTROLLO QUALITA' A05 QUALITY CONTROL DEPARTMENT	ENTE UFFICIALE DI COLLAUDO Z03 INSPECTION AUTHORITY	MARCHIO PRODUZIONE A04 MANUFACTURER'S SYMBOL
D. Gaffuri		MFF

MIM30800 del 29/08/2023

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.1" Thk.4.55mm 300LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 22/76569 - Qty:4,00 Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY * Issued 24-05-2024

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	030/2024	Date	16/05/2024	Customer	RACCORTUBI S.P.A.	Order no.	5826
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Gaffuri Dario	Note	

Procedure / Standard	ASTM E709	Acceptance	ASME VIII DIV. 1 APPENDIX 6

Temperature	15°C

Yoke Type				Type and Trade Equipment						Magnetic Particles Type	
C.C.		C.A.	X	Silver Yoke NDT Italiana Serial no. 1822		Y-2 Yoke Magnaflux Serial no. E3313	X	Y-8 Yoke Magnaflux Serial no. 2440		Wet Fluorescent Magnetic Particles	Illumination Type
										NDT Italiana Elite FW1	Led UV Lamp Magnaflux Serial no. E3512
Note											

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined 100%	Results		Note
							C[1]	NC[1]	
	001	BL 150 RF 3/4"	22/76572	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	002	BL 150 RF 1"	21/74246	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	003	WN 300 RF 2" XS	22/78189	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	004	WN 150 RF 2" XS	23/70486	6	WHOLE ACCESSIBLE SURFACE	6	X		No indications detected
	005	WN 150 RF 1/2" XS	22/75635	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	006	WN 150 RF 3/4" XS	23/70335	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	007	WN 150 RF 1" XS	23/70335	55	WHOLE ACCESSIBLE SURFACE	55	X		No indications detected
	008	WN 150 RF 1" 1/2 XS	22/76569	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	009	WN 300 RF 1" XS	22/76569	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	010	WN 150 FF 1" XS	23/70335	5	WHOLE ACCESSIBLE SURFACE	5	X		No indications detected

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Image / Photo	
Note	Flanges bores and other surfaces were inspected in both directions, axial & circumeferential in accordance with ASTM E709.

Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfarlab.com	Customer Inspector	ROSETTI MARINO Supply Management Dept ☐ Witness ☑ Review

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.1" Thk.4.55mm 300LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 22/76569 - Qty:4,00

Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY * Issued 24-05-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — Nr A03 2024-C_MFF-01243 — Data / Dated 20.05.2024 Z02

RACCORTUBI S.P.A. A06		**Ordine / PO**	5826 A07
Viale De Gasperi, 194		**Item**	010 A07
20010 MARCALLO CON CASONE MI IT		**DDT / Delivery note**	2024-3E301-0001221 A10
		Packing List	2024-3E401-0001229 A11
		Fattura / Invoice	2024-3E401-0001229 A12
		Ns. rif. / Our ref.	2024-3E201-0000800-0010 A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata B07 Heat Code	Nr. colata B07 Heat Nr	Quantità B08 Quantity	Descrizione B01 - (B09 - B11) Description
	23/70335	5,00	WN 150 FF 1" XS LF2 CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED ACC. ASTM E709 :SEE REPORT No: 030/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,180	0,230	1,000	0,009	0,012	0,140	0,110	0,020	0,019	0,200	0,002	0,002	0,010
PRODUCT ANALYSIS	0,182	0,235	1,002	0,010	0,009	0,144	0,106	0,018	0,020	0,196	0,003	0,002	0,011
	Al								CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,026								0,400	0,347	0,472	0,160	--
PRODUCT ANALYSIS	0,025								0,402	0,349	0,467	0,162	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta C10 Test specimen		Forma C10 Shape	°C C03	Snervamento>0,2% C11 Yield Strength>0,2%	Snervamento>1,0% C11 Yield Strength>1,0%	Rottura C12 Tensile	Allungamento C13 Elongation	Contrazione C14 Reduction of area
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
126,60	50,80	1	20	350,0	--	545,0	30,3	65,4

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST					
HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
160,0 ; 163,0	KV	10x10x55 mm	-46	52	35	72	53,0

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2017		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; FF FINISHING 125-250 µin AARH		

Marcatura in acc. B06 Marking in acc. to	ANSI/MSS SP-25-2018	D01 Vis. & Dim.	SATISFACTORY	Origine B16 Origin of Steel	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

UFFICIO CONTROLLO QUALITA' A05 QUALITY CONTROL DEPARTMENT	ENTE UFFICIALE DI COLLAUDO Z03 INSPECTION AUTHORITY	MARCHIO PRODUZIONE A04 MANUFACTURER'S SYMBOL
D. Gaffuri		MFF

MIM30800 del 29/08/2023

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.1" Thk.4,55mm 150LB FF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 23/70335 - Qty:5,00

Protocol: CTCERC202400004902 * CERTIFIED TRUE COPY
* Issued 24-05-2024

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	030/2024	Date	16/05/2024	Customer	RACCORTUBI S.P.A.	Order no.	5826
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Galfuri Dario	Note	

Procedure / Standard	ASTM E709	Acceptance	ASME VIII DIV. 1 APPENDIX 6

Temperature	15°C

Yoke Type				Type and Trade Equipment						Magnetic Particles Type	
C.C.		C.A.	X	Silver Yoke NDT Italiana Serial no. 1822		Y-2 Yoke Magnaflux Serial no. E3313	X	Y-8 Yoke Magnaflux Serial no. 2440		Wet Fluorescent Magnetic Particles	Illumination Type
										NDT Italiana Elite FW1	Led UV Lamp Magnaflux Serial no. E3512
Note											

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined 100%	Results		Note
							C[1]	NC[1]	
	001	BL 150 RF 3/4"	22/76572	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	002	BL 150 RF 1"	21/74246	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	003	WN 300 RF 2" XS	22/78189	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	004	WN 150 RF 2" XS	23/70486	6	WHOLE ACCESSIBLE SURFACE	6	X		No indications detected
	005	WN 150 RF 1/2" XS	22/75635	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	006	WN 150 RF 3/4" XS	23/70335	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	007	WN 150 RF 1" XS	23/70335	55	WHOLE ACCESSIBLE SURFACE	55	X		No indications detected
	008	WN 150 RF 1" 1/2 XS	22/76569	12	WHOLE ACCESSIBLE SURFACE	12	X		No indications detected
	009	WN 300 RF 1" XS	22/76569	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	010	WN 150 FF 1" XS	23/70335	5	WHOLE ACCESSIBLE SURFACE	5	X		No indications detected

ROSETTI MARINO
Supply Management Dept.
Witness ☑ Review

1: C = Compilant - NC = Non Compilant

A FARINA COMPANY	**CERTIFICATO ESAME MAGNETICO**	MIM22800 REV.00 27/02/2023 QAM Luca Frigerio

Image / Photo	
Note	Flanges bores and other surfaces were inspected in both directions, axial & circumeferential in accordance with ASTM E709.

Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfarbrindisi.com	Customer Inspector	ROSETTI MARINO Supply Management Dept Witness ☑ Review

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 1250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: Flange WN diam.1" Thk.4,55mm 150LB FF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 23/70335 - Qty:5,00

raccortubi

00004992

30/05/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
570	NR	19	0,00	TEE RID. 1.1/2"x1" SCH.40/S SEAMLESS	EF6171
570	NR	5	0,00	TEE RID. 1.1/2"x1" SCH.40/S SEAMLESS	1149624
640	NR	5	0,00	CURVE 90° LR 1/2" SCH.40/S SEAMLESS	E71218

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

ITALTEST NDT

CONTROLLI E COLLAUDI INDUSTRIALI
SETTIMO MILANESE – LEGNANO (MI) www.italtest.it

RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI

LIQUID PENETRANT TEST REPORT

dal 1965 — CERT. ISO 9001 LRC0100763/QMS

N° 4.132 / 2024

PAGINA DI PAGINE
Page 1 of 2 Pages

CLIENTE / Customer: RACCORTUBI S.p.A.	ORDINE / Order: 1724000839 - 22.04.2024	COMMESSA / Job: 00002010

OGGETTO / Object: SEE PAGE 2

SPECIFICA GENERALE / General specification	PIANO DI CONTROLLO / Control Plan	FASE / Phase	CRITERIO D'ACCETTAZIONE / Acceptance Standards
ASTM SE 165			ASME VIII DIV.1 APP.8

PROCEDURA / Procedure	MATERIALE / Material	DISEGNO / Drawing — FIG. / Fig.	% CONTROLLATA / Extent %
	SEE PAGE 2		100% SURFACE

CONDIZIONE SUPERFICE / Surface Conditions	SALDATO / As Welded	MOLATO / Ground	LAVORATO / Machined	FORGIATO / As Forged	FUSO / As Cast
				X	

STATO DEL MATERIALE / Material Status	PRIMA DEL T.T. / Before Heat Treatment	DOPO T.T. / After Heat Treatment	DOPO RIPARAZIONE / After Repair

DATI DELLA PROVA / Test Data

METODO DI PULIZIA / Precleaning Method: SOLVENT AND PAPER

TECNICA / Technique	CONTRASTO DI COLORE / Color Contrasting	FLUORESCENTE / Fluorescent
	X	
	ILLUMINAZIONE / White Light Intensity: 1200 lx	ILLUMINAZIONE / Black Light Intensity

METODO DI ISPEZIONE Liquid Penetrant Inspection Method	MARCA / Brand	TIPO / Type		PENETRANTE / Penetrant		LOTTO / Batch	SCADENZA / Expiry
	N.D.T.				SPRAY / Spray X	210115Ps	02/2025
			LAVABILE IN ACQUA / Water Washable X		PENNELLO / Brush		
			POST EMULSIONABILE / Post Emulsifiable	RIVELATORE / Developer	SECCO / Dry		
			RIMOVIBILE CON SOLVENTE / Solvent Removable		UMIDO / Wet X	230206W150s	01/2027

TEMPO DI PENETRAZIONE / Dwell Time	METODO DI PULIZIA / Cleaning Method
20 MINUTE	WATER AND PAPER
TEMPO DI SVILUPPO / Developing Time: 10 MINUTE	METODO DI PULIZIA / Cleaning Method: WATER AND PAPER

RISULTATI DELLA PROVA / Test Results

SENZA DIFETTI / No Defects	DIFETTI ACCETTABILI / Accettable Defects	DIFETTI NON ACCETTABILI / Unaccepptable Defects
X		

OSSERVAZIONI O DESCRIZIONE DELLE INDICAZIONI / Description Of Defects, Size And Location

RISULTATI / Results	CONFORME ALLA SPECIFICA / According To Specification	NON CONFORME ALLA SPECIFICA / Not According To Specification	SCARTO / Scrap
	X		

NOTE / Notes

PROVA EFFETTUATA PRESSO / Test Carried Out At: WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE / Technician	RAPPRESENTANTE DEL CLIENTE / Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO / 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT DATA / Date 29 / 05 / 2024	ROSETTI MARINO Supply Management Dept. DATA / Date ☐ Witness ☑ Review	DATA / Date

ITALTEST NDT

CONTROLLI E COLLAUDI INDUSTRIALI
SETTIMO MILANESE – LEGNANO (MI) www.italtest.it

RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI

LIQUID PENETRANT TEST REPORT

dal 1965
CERT. ISO 9001 LRC0100763/QMS

N° 4.132 / 2024

PAGINA DI PAGINE
Page 2 of 2 Pages

CLIENTE / Customer	ORDINE / Order	COMMESSA / Job
RACCORTUBI S.p.A.	1724000839 - 22.04.2024	00002010

ITEM Item	Q.TÀ Q.ty	DESCRIZIONE Description	MATERIALE Material	COLATA Heat
570	19	RED.TEES 1 ½"x 1" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	EF6171
570	5	RED.TEES 1 ½"x 1" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	1149624
640	5	ELBOWS 90° LR ½" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403WP.316/316L DIM/SMUSSI ANSI B16.9/16./25	E71218
-	-	-	-	-

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT	ROSETTI MARINO Supply Management Dept.	
DATA Date 29 / 05 / 2024	DATA Date ☐ Witness ☑ Review	DATA Date

raccortubi Heat num. or Pcs. marking: EF6171 - Qty:19,00

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 1.1/2"X1" SCH.40/S SEAMLESS

Order: 1724000839 - 22.04.24 - Item n.: 570 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

MILL TEST CERTIFICATE

According to
EN 10204 3.1

ZHEJIANG JNDIA PIPELINE INDUSTRY CO., LTD.
No.366,Avenue 6,Binhai, Jinhai Industrial Park, Economy& Technology Developing Zone, Wenzhou, 325025, Zhejiang Province, China.
Tel: +86-577-85826161 Fax: +86-577-85826565
Email: Sales@jndia.com.cn

MTC NO.	JNDIA2023-GW1211-11
Date of issue	06/Dec/23
Material Specification	ASTM A403-22
Material	WP316/316L
Dimensional Specification	ASME B16.9-2018
Melting Process	Electric Furnace

Order No.:1798
ISO 9001:2015: 50095-2009-AQ-RGC-RvA
PED 2014/68/EU Cer: 0045/202/WZ/2456/23
AD 2000-Merkblatt W0 Cert. No.: TN/AD2000-W0/2456/23

Chemical Analysis

Item No.	Item Description	Heat No.	Qty(PCS)	%C	%Si	%Mn	%P	%S	%Cr	%Ni	%Cu	%N	%Mo	
				≤0.030	≤1.00	≤2.00	≤0.045	≤0.030	16.0-18.0	10.0-14.0			2.0-3.0	
16	CURVE 90 SR 2" SCH.80S	EF6171	50	0.023	0.49	1.06	0.028	0.001	16.54	10.08			2.09	
29	RID ECC 11/2"X11/4" SCH.80S	EF6171	5	0.023	0.49	1.06	0.028	0.001	16.54	10.08			2.09	
39	TEE RID 11/4"X3/4" SCH.10S	EF6171	15	0.023	0.49	1.06	0.028	0.001	16.54	10.08			2.09	
40	TEE RID.SS 2.1/2" X 1" SCH.10S WP316/L+	EF6171	50	0.023	0.49	1.06	0.028	0.001	16.54	10.08			2.09	
41	TEE RID 11/2"X1" SCH.40S	EF6171	20	0.023	0.49	1.06	0.028	0.001	16.54	10.08			2.09	
43	TEE RID 11/2" X 3/4" SCH.10S	EF6171	20	0.023	0.49	1.06	0.028	0.001	16.54	10.08			2.09	
			160											

Mechanical Properties

Item No.	Item Description	Sample Specification	Lab Temperature	Tensile MPa	Yield (MPa) Rp 0.2	Elong %	Red.Area %	Hardness HRC	Corrosion Test ASTM A262 Practice E	PMI Test	RT Test	HT Test	Visual & Dimension
		12.5*50	20℃	≥515	≥205	≥28	-	≤22	-	-	-	-	-
16	CURVE 90 SR 2" SCH.80S	-	-	614	306	52	-	<20/<20/<20	ACC	ACC	-	-	ACC
29	RID ECC 11/2"X11/4" SCH.80S	-	-	614	306	52	-	<20/<20/<20	ACC	ACC	-	-	ACC
39	TEE RID 11/4"X3/4" SCH.10S	-	-	614	306	52	-	<20/<20/<20	ACC	ACC	-	-	ACC
40	TEE RID.SS 2.1/2" X 1" SCH.10S WP316/L+	-	-	614	306	52	-	<20/<20/<20	ACC	ACC	-	-	ACC
41	TEE RID 11/2"X1" SCH.40S	-	-	614	306	52	-	<20/<20/<20	ACC	ACC	-	-	ACC
43	TEE RID 11/2" X 3/4" SCH.10S	-	-	614	306	52	-	<20/<20/<20	ACC	ACC	-	-	ACC

HEAT TREATMENT: SOLUTION TREATED AT 1050℃, WATER QUENCHED
WE CERTIFY THIS MATERIAL HAS BEEN MANUFACTURED AND EXAMINED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE SPECIFICATION(S) AND THE RESULTS OF ALL EXAMINATIONS ARE ACCEPTABLE
NACE MR0175/ISO 15156-1 2020.IGC-262
WE CERTIFY ALL PRODUCTS LISTED ON OUR CERTIFICATES DO NOT CONTAIN ANY RAW MATERIALS ORIGINATING IN RUSSIA.

CHIEF INSPECTOR:

浙江金迪管业有限公司 ZHEJIANG JNDIA PIPELINE INDUSTRY CO., LTD. 质检专用章 QUALITY INSPECTION SPECIAL SEAL

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Protocol: CTCERC202400004992 * CERTIFIED TRUE COPY * Issued 30-05-2024

raccortubi Heat num. or Pcs. marking: 1149624 - Qty:5,00

Description: TEE RID. 1.1/2"x1" SCH.40/S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 570 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000010

Protocol: CTCERC2024000004992 * CERTIFIED TRUE COPY * Issued 30-05-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5
29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente RACCORTUBI S.p.A.
Customer

Ordine N. OS000039 del 30-01-2024
P.O.N./C.

Pos. N. 1 **Q.tà** 120
Item/Poste Q.ty/Q.té

(*) Marcatura e cert. N. 1149624
Material Marking e Cert. N.

Created on: 04-04-2024

Descrizione RED.TEES 1.1/2"x1" SCH.40/S SEAMLESS
Description
Description

Specifica FITTINGS TO ASME II Part.A SA403/403M Ed.2023
Specification ASTM A403/403M-22b WP 316/316L
Spécification DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: MANNESMANN STAINLESS TUBES Cert. No.: 3-23-0568-rev.01
Raw material - manufacturer/Materiel du depart - fabriquant:
MANNESMANN STAINLESS TUBES Cert. No.: 3-23-0568-rev.01

Specifica Specification/Specification	Colata N. Heat N. Couléè N.	N. prova Specimen N. Echantil. N.	Snervamento Yield strength Limite d'elasticité N/mm2	Rottura Tensile Resistance à la traction N/mm2	Allungam. % Elongation Allongement	Durezza Hardness as per NACE MR01-75	Durezza Hardnes Dureté	Resilienza Impact energy Resilience Joules
SMLS PIPES TO ASME/ASTM SA/A 312TP 316/316L, DIMS TO ANSI B36.19	RL584	QL30182200	263	580	45	HRC<22	HRC 9	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Couléè N.	C	Si	Mn	P	S	Cr	Ni	Mo	N	Co				PRE	FERRITE
RL584	0,012	0,30	1,83	0,025	0,0070	16,8	11,1	2,1	0,07	0,12					

Prove
Tests/Tests

Prova di corrosione A262 Prat. E: Conforme
Corrosion Test A262 Pract. E: In conformity
Essais de corrosion A262 Prat. E: En Conformité

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager RBacchi

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/EU annex I para 4.3

Materials comply with MESC 76/110 & 76/202.

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS ACC. TO ASTM A380
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication

Formato a freddo	Senza saldatura
Cold formed	Seamless
Formés à froid	Sans soudure

Ispezione
Inspection/inspéction

Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique

Solubilizzazione a 1045°C

Solution Annealing at 1045°C , water quenching

Hypertrempés à 1045°C

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☑ Review

CTCERT202400003629.1.0001

JNDIA®

浙 江 志 达 管 业 有 限 公 司

Zhejiang Jndia Pipeline Industry Co.,Ltd
电话tel: +86-577-85826161 传真fax: +86-577-85826565 电子信箱Email: Sales@jndia.com.cn
中国浙江省温州经济技术开发区金海园区滨海六道366号
No.366,Avenue 6,Binhai, Jinhai Industrial Park, Economy& Technology Developing Zone, Wenzhou, 325025, Zhejiang Province, China

产品质量证明书

Mill Test Certificate

压力管道元件 TS Cert. No.:TS2733G94-2024
ISO 9001:2015: 50095-2009-AQ-RGC-RvA
PED 2014/68/EU Cer: 07/202/9030/WZ/2456/20
AD 2000-Merkblatt W0 Cert. No.:07/202/9030/WP/2456/20

编号No.:JNDIA/R08-29

证书 Certificate: EN10204 3.1　　证书号 Certificate No.: JNDIA2023-GW132-23

客 户

订单号PO No.:PUR-IOX01298FF

产品描述 Description: STAINLESS STEEL PIPE FITTING/Cold forming

材质 Material:ASTM A403-2022,ASME SA403-2021 WP316/316L; ASME Section II Part A-2019 and specification FS-ASTM Rev.6

热处理Heat Treatment:Solution annealed&water quenched(1050℃)/20Min

生产标准 Manufacturing Standard:ASME B16.9-2018

产品交货情况 Product Delivery:

序号 NO.	品名Description	规格Specification	材质 Material	数量 Quantity(PCS)	炉号 Heat No.	备注Remarks
8	ELBOW 90 LR	3/8" SCH10S	WP316/316L-S	100	E71218	
9	ELBOW 90 LR	1/2" SCH40S	WP316/316L-S	475	E71218	
10	ELBOW 90 LR	1/2" SCH80S	WP316/316L-S	250	E71218	
12	ELBOW 90 LR	3/4" SCH10S	WP316/316L-S	1200	E71218	
14	ELBOW 90 LR	1" SCH40S	WP316/316L-S	430	E71218	

检测结果（标准要求已符合，见如下表格)Inspection Results(The Requirements are fulfilled as listed in Below)

A.化学成分 Chemical Composition: [%]

炉号Heat No.		C ≤0.030	Si ≤1.00	Mn ≤2.00	P ≤0.045	S ≤0.030	Cr 16.0-18.0	Ni 10.0-14.0	Nb	N	Ti	Mo 2.0-3.0
8	E71218	0.019	0.48	1.06	0.032	0.001	16.53	10.29				2.06
9	E71218	0.019	0.48	1.06	0.032	0.001	16.53	10.29				2.06
10	E71218	0.019	0.48	1.06	0.032	0.001	16.53	10.29				2.06
12	E71218	0.019	0.48	1.06	0.032	0.001	16.53	10.29				2.06
14	E71218	0.019	0.48	1.06	0.032	0.001	16.53	10.29				2.06

B.机械性能 Mechanical Property:

炉号 Heat No.		屈服强度Yield Strength(MPa) ≥205	拉伸强度 Tensile Strength(MPa) W:12.5mm ≥515	延伸率 (L) Elongation A50(%) ≥28	硬度 Hardness (HRC) ≤22	断面收缩率 Reduction of Area(Z%)	冲击试验 Charpy Impact(AK)
		$R_p0.2$	R_m	A50			
8	E71218	305	611	53	<20/<20/<20	/	/
9	E71218	305	611	53	<20/<20/<20	/	/
10	E71218	305	611	53	<20/<20/<20	/	/
12	E71218	305	611	53	<20/<20/<20	/	/
14	E71218	305	611	53	<20/<20/<20	/	/

C.检测及相关数据验证 Inspection and Related Data Verify

尺寸检查 Dimensional Check	ACC	晶间腐蚀 Corrosion Test ASTM A262 Practice E	ACC
表面检查 Surface Visual Inspection	ACC		
光谱分析 100%PMI	ACC		

D.备注Remarks:

Melting process of the base material mentioned :AOD.
NACE MR 0103/ISO 17945:2015/NACE MR 0175/ISO 15156-3:2015.
We hereby certify that the material has been made and tested in accordance with the above specification and the requirement called for on the order. Material free from mercury and radiation contamination.

ZHEJIANG JNDIA PIPELINE INDUSTRY CO., LTD. 浙江志达管业有限公司 QUALITY INSPECTION SPECIAL SEAL 质检专用章

制单人：湛红艳　　审 核：　　日期：2023-04-17　　检验部门(章)：

Prepared by: Zhan HY　　Reviewed by　　Date　　Stamp

ROSETTI MARINO
Supply Management Dept.
Witness　　Review

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 640 - Proj. 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: CURVE 90° LR 1/2" SCH.40/S SEAMLESS

raccortubi　Heat num. or Pcs. marking: E71218 - Qty:5,00
Protocol: CTCERC202400004992 * CERTIFIED TRUE COPY
* Issued 30-05-2024

raccortubi

00004994

28/05/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				RACCORDI SEC. ASME/ASTM SA/A 420 GR.WPL6, DIM./SMUSSI ANSI B16.9, B16.25	
660	NR	2	0,00	CAPS 1" XS	15353
670	NR	14	0,00	CURVE 90° LR 2" XS SEAMLESS	774
680	NR	4	0,00	CURVE 90° LR 1/2" XS SEAMLESS	16J
690	NR	110	0,00	CURVE 90° LR 1" XS SEAMLESS	402212
700	NR	8	0,00	CURVE 90° LR 1.1/2" XS SEAMLESS	413640
710	NR	1	0,00	RID. CONC. 2"x1" XS SEAMLESS	433876
720	NR	1	0,00	RID. CONC. 3/4"x1/2" XS SEAMLESS	0F
730	NR	5	0,00	RID. CONC. 1"x3/4" XS SEAMLESS	56
740	NR	2	0,00	RID. CONC. 1.1/2"x1" XS SEAMLESS	32
750	NR	1	0,00	RID. ECC. 4"x2" STD/XS SEAMLESS	14G5207
760	NR	2	0,00	RID. ECC. 2"x1" XS SEAMLESS	J3K5342
770	NR	1	0,00	RID. ECC. 4"x1.1/2" STD/XS SEAMLESS	513131
780	NR	24	0,00	TEE UG. 1" XS SEAMLESS	02

raccortubi

00004994

28/05/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
790	NR	1	0,00	TEE RID. 4"x1.1/2" STD/XS SEAMLESS	623918
800	NR	5	0,00	TEE RID. 1"x3/4" XS SEAMLESS	02

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P1	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
1	CAP 1" XS WPL6	2,00	15353

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PLATE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Al%	N%	Ti%	Nb%	B%
0,170	0,970	0,230	0,011	0,017	0,030	0,020	0,002	0,020	0,003	0,032	0,0040	0,0030	0,0020	0,0006

CE_{IIW} 0,34

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	348	530	32

Impact Test

Direction L Test Temperature -46 °C Test Type ISO-V

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
2.5 X 10	0,2	Base Mat.	44	43	41	43

Hardness Test

Base Metal Avg 127 HBW

ROSETTI MARINO
Supply Management Dept
☐ Witness ☑ Review

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature. This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 660 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: CAPS 1" XS

raccortubi Heat num. or Pcs. marking: 15353 - Qty:2,00 Protocol: CTCERC202400004994 * CERTIFIED TRUE COPY * Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6LB102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	NAME ROSETTI MARINO
SIGNED	SIGNED	SIGNED Supply Management Dept.
DATE 22/05/2024	22/05/2024	☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 660 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: CAPS 1" XS

raccortubi Heat num. or Pcs. marking: 15353 - Qty:2,00

Protocol: CTCERC202400004994 * CERTIFIED TRUE COPY * Issued 28-05-2024

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152987 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P2	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
2	ELBOW 2" XS 90° LR WPL6	14,00	774

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Al%	Ti%	Nb%
0,160	0,940	0,250	0,013	0,005	0,010	0,040	0,008	0,020	0,003	0,024	0,0010	0,0010

CE_{IIW} 0,33

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	341	505	34

Impact Test

Direction L **Test Temperature** -46 °C **Test Type** KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
5 X 10	0,4	Base Mat.	57	66	71	65

Hardness Test

Base Metal **Avg** 139 HBW

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature. This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 670 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: CURVE 90° LR 2" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 774 - Qty:14,00

Protocol: CTCERC202400004994 * CERTIFIED TRUE COPY * Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	NAME ROSETTI MARINO
SIGNED	SIGNED	SIGNED Supply Management Dept.
DATE 22/05/2024	22/05/2024	☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 670 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: CURVE 90° LR 2" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 774 - Qty:14,00

Protocol: CTCERC202400004994 * CERTIFIED TRUE COPY * Issued 28-05-2024

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P3	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
3	ELBOW 1/2" XS 90° LR WPL6	4,00	16J-16J0110

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Nb%
0,110	1,250	0,220	0,007	0,003	0,020	0,120	0,010	0,010	0	0

CE_{IIW} 0,35

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	375	500	31

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
2.5 X 10	0,2	Base Mat.	35	41	37	38

Hardness Test

Base Metal Avg 114 HBW

ROSETTI MARINO
Supply Management Dept
☐ Witness ☑ Review

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature. This certificate is not a declaration of origin nor may it be used as a declaration of origin.

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 680 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: CURVE 90° LR 1/2" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 16J - Qty:4,00

Protocol: CTCERC202400004994 * CERTIFIED TRUE COPY
* Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	NAME ROSETTI MARINO
SIGNED	SIGNED	SIGNED Supply Management Dept.
DATE 22/05/2024	22/05/2024	☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 680 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: CURVE 90° LR 1/2" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 16J - Qty:4,00

Protocol: CTCERC202400004994 * CERTIFICATE COPY
* Issued 28-05-2024

CTCERT202400003531.1.0001

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P4	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
4	ELBOW 1" XS 90° LR WPL6	110,00	402212

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Nb%
0,180	0,560	0,250	0,012	0,016	0,021	0,027	0,009	0,036	0,007	0,0150
	CE_{IIW} 0,29									

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	311	526	32

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
2.5 X 10	0,2	Base Mat.	38	42	43	41

Hardness Test

Base Metal Avg 133 HBW

ROSETTI MARINO
Supply Management Dep.
☐ Witness ☑ Revie

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A. Order: 1724000839 - 22.04.24 - Item n.: 690 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: CURVE 90° LR 1" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 402212 - Qty:110,00 Protocol: CTCERC202400004994 * CERTIFIED/TRUE COPY * Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	NAME ROSETTI MARINO
SIGNED	SIGNED	SIGNED Supply Management Dept.
DATE 22/05/2024	22/05/2024	☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 690 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: CURVE 90° LR 1" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 402212 - Qty:110,00

Protocol: CTCERC202400004994 * CERTIFIED COPY * Issued 28-05-2024

CTCERT202400003532.1.0001

I.R.C. S.p.A.
SEDE LEGALE:
Via Guamen del Gesù, 3 - I-26100 Cremona (CR) - Italy

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EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

IRC SPA
FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P5	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
5	ELBOW 1.1/2" XS 90° LR WPL6	8,00	413640

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Nb%
0,150	0,580	0,210	0,018	0,013	0,042	0,045	0,018	0,078	0,008	0,0020

CE_{IIW} 0,27

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	295	503	33

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
5 X 10	0,4	Base Mat.	67	54	62	61

Hardness Test

Base Metal Avg 135 HBW

ROSETTI MARINO
Supply Management Dept
☐ Witness ☑ Review

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature. This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 700 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: CURVE 90° LR 1.1/2" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 413640 - Qty:8,00

Protocol: CTCERC202400004994 * CERTIFICATE COPY
* Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	NAME ROSETTI MARINO
SIGNED	SIGNED	SIGNED Supply Management Dept.
DATE 22/05/2024	22/05/2024	☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 700 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: CURVE 90° LR 1.1/2" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 413640 - Qty:8,00

Protocol: CTCERC202400004994 * CERTIFICATE COPY
* Issued 28-05-2024

CTCERT202400003533.1.0001

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
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EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P6	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
6	R.C. 2" x 1" XS WPL6	1,00	433876

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Nb%
0,220	0,620	0,260	0,025	0,016	0,046	0,044	0,015	0,070	0,016	0,0020

CE_{IIW} 0,35

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	298	523	36

Impact Test

Direction L **Test Temperature** -46 °C **Test Type** KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
5 X 10	0,4	Base Mat.	87	91	79	86

Hardness Test

Base Metal **Avg** 140 HBW

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature. This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 710 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. CONC. 2"x1" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 433876 - Qty:1,00

Protocol: CTCERC202400004994 * CERTIFIED/TRUE COPY
* Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	NAME ROSETTI MARINO
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	Supply Management Dept.
SIGNED	SIGNED	SIGNED ☐ Witness ☒ Review
DATE 22/05/2024	22/05/2024	

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 710 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. CONC. 2"x1" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 433876 - Qty:1,00

Protocol: CTCERC202400004994 * CERTIFIED COPY * Issued 28-05-2024

CTCERT202400003534.1.0001

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy
STABILIMENTO E UFFICI:
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Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it
EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

IRC SPA
FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P7	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
7	R.C. 3/4" x 1/2" XS WPL6	1,00	0F-0F2350

Specification ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6

Heat Treatment NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR

Manufacture standard ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Al%	N%	Ti%	Nb%
0,110	1,280	0,260	0,010	0,003	0,020	0,110	0,020	0,010	0,001	0	0	0	0

CE_{IIW} 0,35

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction T

Unit	Y.S.	T.S.	Elongation %
MPA	275	451	31

Impact Test

Direction T **Test Temperature** -46 °C **Test Type** KV

Impact Value (J)			
(1)	(2)	(3)	Avg
32	30	33	32

Hardness Test

Base Metal Avg 142 HBW

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature
This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 720 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. CONC. 3/4"x1/2" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 0F - Qty:1,00

Protocol: CTCERC202400004994 * CERTIFIED TRUE COPY
* Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	NAME ROSETTI MARINO
SIGNED	SIGNED	SIGNED Supply Management Dept.
DATE 22/05/2024	22/05/2024	☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 720 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. CONC. 3/4"x1/2" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 0F - Qty:1,00

Protocol: CTCERC202400004994 * CERTIFIED COPY * Issued 28-05-2024

CTCERT202400003535.1.0001

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P8	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
8	R.C. 1" x 3/4" XS WPL6	5,00	56-123056

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Al%	Nb%
0,127	1,090	0,220	0,012	0,002	0,071	0,072	0,026	0,189	0,001	0,035	0,0015

CE_{IIW} 0,35

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	325	537	31

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
2.5 X 10	0,2	Base Mat.	35	38	35	36

Hardness Test

Base Metal Avg 119 HBW

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

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This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 730 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. CONC. 1"x3/4" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 56 - Qty:5,00

Protocol: CTCERC202400004994 * CERTIFICATE COPY
* Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	NAME
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	SIGNED ROSETTI MARINO Supply Management Dept.
SIGNED	SIGNED	☐ Witness ☑ Review
DATE 22/05/2024	22/05/2024	

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 730 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. CONC. 1"x3/4" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 56 - Qty:5,00

Protocol: CTCERC202400004994 * CERTIFICATE COPY
* Issued 28-05-2024

I.R.C. S.p.A.
SEDE LEGALE:
Via Guameri del Gesù, 3 - I-26100 Cremona (CR) - Italy
STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it
EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

IRC SPA FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P9	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
9	R.C. 1.1/2" x 1" XS WPL6	2,00	32-J9K6232

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Ti%	Nb%	B%
0,110	1,260	0,290	0,012	0,001	0,020	0,110	0,010	0,010	0	0,0100	0	0,0001

CE_{IIW} 0,35

Legenda: CE_{IW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	357	529	32

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
2.5 X 10	0,2	Base Mat.	42	39	45	42

Hardness Test

Base Metal Avg 131 HBW

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

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Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 740 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: RID. CONC. 1.1/2"x1" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 32 - Qty:2,00

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	NAME ROSETTI MARINO
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	SIGNED Supply Management Dept
SIGNED	SIGNED	Witness Review
DATE 22/05/2024	22/05/2024	

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 740 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. CONC. 1.1/2"x1" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 32 - Qty:2,00

Protocol: CTCERC202400004994 * CERTIFIED TRUE COPY * Issued 28-05-2024

CTCERT202400003537.1.0001

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy
STABILIMENTO E UFFICI:
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Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it
EEC. CODE. IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P10	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
10	R.E. 4" x 2" XS WPL6	1,00	14G5207

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Al%	N%	Ti%	Nb%
0,120	1,300	0,250	0,013	0,002	0,020	0,120	0,010	0,020	0,010	0	0	0	0,0010

CE_{IIW} 0,37

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	313	470	33

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
7.5 X 10	0,6	Base Mat.	263	266	270	266

Hardness Test

Base Metal Avg 138 HBW

ROSETTI MARINO

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector / Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini		

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This certificate is not a declaration of origin nor may it be used as a declaration of origin
Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 750 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: RID. ECC. 4"x2" STD/XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 14G5207 - Qty:1,00
Protocol: CTCERC202400004994 * CERTIFICATE COPY
* Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	NAME ROSETTI MARINO
SIGNED	SIGNED	SIGNED Supply Management Dept.
DATE 22/05/2024	22/05/2024	☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 750 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. ECC. 4"x2" STD/XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 14G5207 - Qty:1,00

Protocol: CTCERC202400004994 * CERTIFIED TRUE COPY * Issued 28-05-2024

CTCERT202400003538.1.0001

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy
STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it
EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P11	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
11	R.E. 2" x 1" XS WPL6	2,00	J3K5342

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Nb%
0,120	1,310	0,270	0,010	0,001	0,020	0,120	0,010	0,020	0	0

CE_{IIW} 0,37

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	299	526	31

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
2.5 X 10	0,2	Base Mat.	40	42	39	40

Hardness Test

Base Metal Avg 139 HBW

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector / Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini		

This certificate is issued by a computerized system and is valid without stamp and signature
This certificate is not a declaration of origin nor may it be used as a declaration of origin
Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 760 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: RID. ECC. 2"x1" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: J3K5342 - Qty:2,00
Protocol: CTCERC202400004994 * CERTIFICATE COPY * Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	NAME ROSETTI MARINO
SIGNED	SIGNED	SIGNED Supply Management Dept.
DATE 22/05/2024	22/05/2024	☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 760 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. ECC. 2"x1" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: J3K5342 - Qty:2,00

Protocol: CTCERC202400004994 * CERTIFICATE COPY * Issued 28-05-2024

CTCERT202400003539.1.0001

I.R.C. S.p.A.
SEDE LEGALE:
Via Guameri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

IRC SPA
FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P12	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
12	R.E. 4" x 1.1/2" XS WPL6	1,00	513131

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Nb%
0,160	0,610	0,220	0,026	0,012	0,018	0,012	0,005	0,021	0,002	0,0020

CE_{IIW} 0,27

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	298	515	34

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
7.5 X 10	0,6	Base Mat.	119	126	128	124

Hardness Test

Base Metal Avg 140 HBW

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature. This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 770 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. ECC. 4"x1.1/2" STD/XS SEAMLESS

raccortubi Heat num. or Pos. marking: 513131 - Qty:1,00

Protocol: CTCERC202400004994 * CERTIFICATE COPY
* Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	NAME ROSETTI MARINO
SIGNED	SIGNED	SIGNED Supply Management Dept.
DATE 22/05/2024	22/05/2024	☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 770 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: RID. ECC. 4"x1.1/2" STD/XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 513131 - Qty:1,00

Protocol: CTCERC202400004994 * CERTIFIED TRUE COPY * Issued 28-05-2024

CTCERT202400003540.1.0001

I.R.C. S.p.A.
SEDE LEGALE:
Via Guameri del Gesù, 3 - I-26100 Cremona (CR) - Italy
STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it
EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

IRC SPA
FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P13	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
13	TEE 1" XS WPL6	24,00	02-J6L8102

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	TEE COLD FORMED, THEN HEAT TREATED AND MAGNETIC PARTICLE EXAMINATED ACCORDING ASTM E709
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Ti%	Nb%	B%
0,110	1,300	0,240	0,015	0,002	0,030	0,120	0,020	0,010	0	0,0100	0	0,0002
	CE_{IIW} 0,36											

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	337	487	43

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
2.5 X 10	0,2	Base Mat.	43	51	56	50

Hardness Test

Base Metal Avg 138 HBW

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature. This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 780 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: TEE UG. 1" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 02 - Qty:24,00

Protocol: CTCERC202400004994 * CERTIFIED TRUE COPY
* Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	NAME ROSETTI MARINO
SIGNED	SIGNED	SIGNED Supply Management Dept
DATE 22/05/2024	22/05/2024	Witness Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 780 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: TEE UG. 1" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 02 - Qty:24,00

Protocol: CTCERC202400004994 * CERTIFIED FREE COPY * Issued 28-05-2024

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P14	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
14	TEE 4" x 1.1/2" XS WPL6	1,00	623918

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	COLD FORMED
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Nb%
0,150	0,980	0,230	0,013	0,004	0,130	0,140	0,050	0,150	0,020	0,0100

CE_{IIW} 0,37

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	311	527	30

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
7.5 X 10	0,6	Base Mat.	68	75	61	68

Hardness Test

Base Metal Avg 147 HBW

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature
This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 790 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: TEE RID. 4"x1.1/2" STD/XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 623918 - Qty:1,00

Protocol: CTCERC202400004994 * CERTIFICATE COPY
* Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
CURVA 1.1/2" XS 90° LR WPL6	8	100%	EXTERNAL	413640	A833-4	ACCEPTABLE
R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	NAME ROSETTI MARINO
SIGNED	SIGNED	SIGNED Supply Management Dept.
DATE 22/05/2024	22/05/2024	☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 790 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: TEE RID. 4"x1.1/2" STD/XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 623918 - Qty:1,00

Protocol: CTCERC202400004994 * CERTIFIED TRUE COPY * Issued 28-05-2024

CTCERT202400003542.1.0001

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4527-P15	23/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005824	

	Item	Quantity	Heat Id.
15	TEE 1" x 3/4" XS WPL6	5,00	02-J6L8102

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	TEE COLD FORMED, THEN HEAT TREATED AND MAGNETIC PARTICLE EXAMINATED ACCORDING ASTM E709
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Ti%	Nb%	B%
0,110	1,300	0,240	0,015	0,002	0,030	0,120	0,020	0,010	0	0,0100	0	0,0002

CE_{IIW} 0,36

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	351	488	45

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
2.5 X 10	0,2	Base Mat.	42	44	44	43

Hardness Test

Base Metal Avg 128 HBW

ROSETTI MARINO
Supply Management Dept.
Witness Review

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature. This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 800 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: TEE RID. 1"x3/4" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 02 - Qty:5,00

Protocol: CTCERC202400004994 * CERTIFICATE COPY
* Issued 28-05-2024

ALFACND	MAGNETIC PARTICLE REPORT	REPORT No. MPI 23052024
		DATE 22/05/2024

Mod. 7.6.1 Rev. 0	LOCATION / WORKSITE	MATERIAL
CLIENT	CORTEMAGGIORE	/
I.R.C. S.p.a.	ALFACND JOB NUMBER 2024/002-005/A	DIAMETER /
	ALFACND PROCEDURE IL 7.6.1 Rev. IRC_5	SURFACE CONDITION SAND BLASTED
CLIENT JOB NUMBER 4527/2024	CASTING NUMBER /	MATERIAL /

MAGNETIC PARTICLE INSPECTION

EQUIPMENT	COIL MAGISCOPE 6000 SN 10128
METHOD	DIRECT MAGNETIC FLOW
INK / POWDER	DRY YELLOW MAGNETIC POWDER
CURRENT / VOLTAGE	1000 A/TURNS
CONTRAST PAINT	/
CODE NO.	ASME V art. 7, art. 25, SE 709
ACC. CRITERIA	ASME VIII div.1 appendix 6
SURFACE LIGHT INTENSITY	>1000 LUX

RESULTS

Identification	Quantity	Area Examinated	Side	Casting Nr	Serial number/Item	Result
CAP 1" XS WPL6	2	100%	EXTERNAL	15353	A829-4	ACCEPTABLE
ELBOW 2" XS 90° LR WPL6	14	100%	EXTERNAL	774	A830-4	ACCEPTABLE
CURVA 1/2" XS 90° LR WPL6	4	100%	EXTERNAL	16J-16J0110	A831-4	ACCEPTABLE
CURVA 1" XS 90° LR WPL6	110	100%	EXTERNAL	402212	A832-4	ACCEPTABLE
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R.C. 2" X 1" XS WPL6	1	100%	EXTERNAL	433876	A834-4	ACCEPTABLE
R.C. 3/4" 1/2" XS WPL6	1	100%	EXTERNAL	0F-0F2350	A835-4	ACCEPTABLE
R.C. 1" X 3/4" XS WPL6	5	100%	EXTERNAL	56-123056	A836-4	ACCEPTABLE
R.C. 1.1/2" X 1" XS WPL6	2	100%	EXTERNAL	32-J9K6232	A837-4	ACCEPTABLE
R.E. 4" X 2" XS WPL6	1	100%	EXTERNAL	14G5207	A838-4	ACCEPTABLE
R.E. 2" X1" XS WPL6	2	100%	EXTERNAL	J3K5342	A839-4	ACCEPTABLE
R.E. 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	513131	A840-4	ACCEPTABLE
TEE 1" XS WPL6	24	100%	EXTERNAL	02-J6L8102	A841-4	ACCEPTABLE
TEE 4" X 1.1/2" XS WPL6	1	100%	EXTERNAL	623918	A842-4	ACCEPTABLE
TEE 1" X 3/4" XS WPL6	5	100%	EXTERNAL	02J6L8102	A843-4	ACCEPTABLE

ALFACND	ALFACND	CLIENT
NDT Tech. 3° Lev. RT ISO 9712 2° Lev. ISO9712 SNT TC1A UT-MT-PT-RT-VT	NDT Resp. 3° Lev. ISO9712 UT (pa-tofd) RT-MT-PT-VT SNT TC1A UT-RT-MT-PT-VT 2° Lev. ISO9712 GT	ROSETTI MARINO Supply Management Dept.
NAME GARBAZZA FABIO	NAME BARDI ALESSANDRO	NAME
SIGNED	SIGNED	SIGNED ☐ Witness ☑ Review
DATE 22/05/2024	22/05/2024	

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 800 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: TEE RID. 1"x3/4" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 02 - Qty:5,00

Protocol: CTCERC202400004994 * CERTIFICATE COPY * Issued 28-05-2024

raccortubi

00005042

30/05/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00002010

Ordine N. P.O. number: 1724000839 - 22.04.24

123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine

Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				TUBI ELETTROUNITI SEC. ASME/ASTM SA/A-312 TP.316/316L, DIM. SEC. ANSI B36.19	
100	M	12,00	2,00	273.00x4.19 WELDED - RX 100%	AUN070583

ROSETTI MARINO
Supply Management Dept.
☑ Witness ☑ Review

raccortubi
Customer: ROSETTI MARINO S.p.A.
Description: 273.00x4.19 WELDED - RX 100%
Heat num. or Pcs. marking: AUN070583 - Qty:12,00
Order: 1724000839 - 22.04.24 - Item n.: 100 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Protocol: CTCERC202400005042 * CERTIFIED TRUE COPY
* Issued 30-05-2024

Certificate No.	F240206006
Date:	FEB 05,2024

檢 驗 證 明 書
MILL'S TEST CERTIFICATE
EN 10204/3.1

彰源企業股份有限公司
FROCH ENTERPRISE CO., LTD.
NO.122 INDUSTRIAL ROAD, TOU-LIU CITY
YUN-LIN 640, TAIWAN
TEL:+886-5-5571669 FAX:+886-5-5571339
Website: www.froch.com

Customer :

Invoice No.	Contract No.	L / C No.	規 範 Specification
FEX20231815	PUR-IOX07319MA	T/T	ASTM A312-2021, ASME SA 312-2021/ASTM A999, ASME SA530, ANSI/ASME B36.19-ASME Section II part A, Edition 2021

產品名稱 Description	項 目 Item No.	產 品 尺 寸 Size	鋼 種 Type	爐 號 Heat No.	數 量 QTY(M)	重 量 Weight(Kg)	熱處理 (℃) Heat Treatment Water Quenched	表面處理 Finish	水壓試驗 Hydrostatic Test (Mpa)	Coil No.
STAINLESS STEEL WELDED PIPE CUT IN THE LENGTH OF 6.0M.	42	10" X SCH 10S	TP 316/TP 316L	AUN070583	150.000	—	1065	PICKLED	4.00	6X253403 027.602

化 學 成 份 Chemical Composition (%)

項 目 Item No.	碳 C	矽 Si	錳 Mn	磷 P	硫 S	鉻 Cr	鎳 Ni	鉬 Mo	氮 N		
Min.						16.00	10.00	2.00			
Max.	0.035	1.000	2.00	0.045	0.030	18.00	14.00	3.00			
42	0.016	0.360	1.35	0.032	0.002	16.62	10.04	2.04	—	—	

機 械 試 驗 Mechanical Test

抗拉強度 Tensile (N/mm^2)	降伏強度 0.2% Yield (N/mm^2)	伸長率 % Elongation	Direction	Width of specimen	Gauge Length	硬度試驗 Hardness HRB	壓扁試驗 Flattening Test	彎曲試驗 Bend	擴口試驗 Flaring Test
				mm	mm				
515	205	35	L.T			99.50	No Crack	No Crack	No Crack
642	292	57	Transverse	38	50.00	86.00	—	GOOD	—

NOTES:
1.The material described herein is certified for no radiation contamination by original Material Manufacturer.
2.The tolerance of chemical composition is according to ASTM A480
3.Heat treatment:Solution annealed and quenched in water.
4.1Ksi = 1000Psi, 1Mpa = 1 N/mm^2 = 0.145038 Ksi.
5.Visual Inspection(Surface) and Dimension Check: Acceptable
6.We hereby certify that material described herein has been manufactured and tested with satisfactory results in accordance with the requirement of the above material specification.

*ACCORDING TO EN10204/3.1 TO EVIDENCE: MATERIAL: ACCORDING TO EN10204/3.1 TO EVIDENCE ASTM A312/ ASME SA312/ASTM A999/ ANSI B36.10/B36.19 CORROSION TEST ACC. TO ASTM A 262 PRACTICE E - OK. HARDNESS TO NACE MR0175/ISO15156-3-MR0103-2015 POSITIVE MATERIAL INDENTIFICATION FLATTENING UP TILL OD 8 INCH,ABOVE OD 8 INCH BENDING TEST 100 PERCENT EDDY CURRENT ACC. TO ASTM E426 - OK. 100 PERCENT HYDROSTATIC TEST - OK. THE MATERIAL DESCRIBED HEREIN IS CERTIFIED FOR NO RADIATION CONTAMINATION BY ORIGINAL MATERIAL MANUFACTURER.
*DIMENSIONAL AND VISUAL EXAMINATION NO OBJECTION.
POSITIVE MATERIAL IDENTIFICATION RESULT IS SATISFIED.
*MARKING:
FROCH<<J.Y.>>-NORM-GRADE-SIZE-WLD-HEAT NO.-ISO 9001/14001 SYSTEM APPROVAL - ET
*Material does not contain steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No 833/2014 and further amendment.
*The Republic of China (Taiwan) government has also joined the international economic sanctions against Russia since February 25, 2022.
*The pipes/tubes are manufactured in Taiwan.
*HS CODE 7306.40

APPROVED CERTIFICATES:
1.QMS according ISO 9001(TUV Cert No:01 100 126922)
2.EMS according ISO 14001(LR Cert No:0069466)
3.PED (TUV Cert No: 01 202 TWN/Q-06 0145)

Lai Yu Lin
QA Manager / Work Inspector.

Q-Y-Q-33-10-A

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

SIDERTEST
mechanical chemical non destructive tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant A: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

RT 1037 / 24

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Tipo di controllo/ Type of control ***Esame radiografico mediante raggi X o raggi Gamma/ Radiographic Testing by means of X-ray or gamma-ray***

Cliente/ Customer	Subcliente/ Subcustomer	Commessa/ Job	Ordine/ Order
Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00002010**	**1724000839**

Prova Nr./ Test Nr.	Posizione/ Item	Qta/ Qty	Colata/ Heat	Materiale/ Material	Descrizione/ Description
547	**100**	**Mt. 12,00**	**AUN070583**	**ASTM A 312 TP316/316L**	**PIPE Ø 273,00 mm W.T. 4,19 mm**

Doc. Cliente/ Client's doc.	*Doc. Sider Test/ Sider Test doc.*	*Norma Esecuzione/ Execution Standard*	*Accettabilità/ Acceptance Std*
	PO 04-005 RT Rev. 22 - IL 04-005-001 RT Rev. 08	**ASME BPVC.V-2023 Art. 2**	**ASME BPVC.VIII.1-2023 UW-51**

Area Esame/ Area Tested **100% Sald. e Z.T.A./ 100% Weld and HAZ** Superficie/ Surface **Come Saldato/ As Welded** Marcatura/ Marking **Stamping**

Tecnica/ Technique: Direzionale - Parete Doppia - Immagine singola - F/ Directional - Double wall - Single wall viewing

Raggi X/ X-Ray Classe EN/ EN Class Strumento/ Equipment **115/RT - MHF 300-D (Gilardoni Spa)** Macchina Focale/ Focal spot (mm) **3**

Parametri/ Details

Spessore/ Thickness (mm) **4.19** Sovrametallo/ Weld Reinforcement (mm) **1** Energia/ Energy **270 kV 3 mA** Tempo di esposizione/ Exposure time **1'**

Distanze/ Distances

Distanza sorgente-oggetto lato sorgente/ Source to source-side-object distance (mm) **1000** Distanza oggetto lato sorgente-film/ Source-side-object to film distance (mm) **5,19**

Films/ IQI

Sviluppo/ Film developing	**Automatico/ Automatic**	Tipo film/ Film type	**KODAK MX125**	Posizione penetrametro/ IQI location	**Lato film/ Film side**
Schermo anteriore/ Front screen	**0,05**	Formato pellicola/ Film size	**100 x 480**	Densità richiesta/ Required densty	**1,8 + 4**
Schermo posteriore/ Back screen	**0,1**	N° Film per busta/ Nr of films for case	**1**	Filo richiesto/ Required wire	**No. 4 (3°) - 0,0063 Inches**
				IQI	**ASTM 1A**

Ug: Effetto Penombra/ Geometric unsharpness **0,02 OK**

Tabella di discontinuità/ Table of discontinuites

A - Inclusioni gassose/ Gas bubbles	C - Tarli/ Wormholes	E - Inclusioni allineat/ Slang lines	G - Mancanza di penetrazione/ Lack of penetration	I - Incisione/ Undercutting	M - Difetto film/ Processing defect
B - Porosità/ Porosity	D - Inclusioni di scoria/ Slang inclusions	F - Mancanza di fusione/ Lack of fusion	H - Cricca/ Crack	L - Cordone irregolare/ Erratic weld bead	N - Tungsteno/ Wolfarm
					R - Riparazione/ Repair

*) Da marker iniziale/ From starting marker

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Operatore CND Liv. II/ Lev. 2 NDE Operator	Data Ingresso Materiale/ Date of Material Arrival	Data esecuzione/ Date of Testing	Data Rapporto di prova/ Test Report Date	Cliente/ Customer	Ispettori/ Inspector	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
SIDER TEST S.r.l. SERGIO FABIO BARBATO UNI EN ISO 9712 LEVEL II SNT-TC-1A LEVEL II ISO 9712	**23/05/2024**	**27/05/2024**	**28/05/2024**	ROSETTI MARINO Supply Management Dept. ☐ Witness ☑ Review		PAOLO AMANI LEVEL 3 SNT-TC-1A/11 1012/RG 11 ISO 9712 N.IT-PND-001119-C UT - ET - RT - MT

SIDERTEST
mechanical chemical non destructive tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant A: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/
Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

RT 1037 / 24

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Tipo di controllo/ Type of control ***Esame radiografico mediante raggi X o raggi Gamma/ Radiographic Testing by means of X-ray or gamma-ray***

Cliente/ Customer	Subcliente/ Subcustomer	Commessa/ Job	Ordine/ Order
Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00002010**	**1724000839**

Prova Nr./ Test Nr.	Posizione/ Item	Qta/ Qty	Colata/ Heat	Materiale/ Material	Descrizione/ Description
547	**100**	**Mt. 12,00**	**AUN070583**	**ASTM A 312 TP316/316L**	**PIPE Ø 273,00 mm W.T. 4,19 mm**

Film N°	Tipo di Saldatura/ Weld type	Saldatore/ Welder	Posizione Film/ Film location	Densita/ Density	Discontinuità/ Discontinuity (mm)			Filo/ Wire	NC
					Tipo/ Type	Lunghezza/ Length	Distanza/ Distance [1]		
59039			1-2	2,2	B	0	0	4	☐
59039			2-3	2,2		0	0	4	☐
59039			3-4	2,2		0	0	4	☐
59039			4-5	2,2		0	0	4	☐
59039			5-6	2,2		0	0	4	☐
59039			6-7	2,2		0	0	4	☐
59039			7-8	2,2		0	0	4	☐
59039			8-9	2,2		0	0	4	☐
59039			9-10	2,2		0	0	4	☐
59039			10-11	2,2		0	0	4	☐
59039			11-12	2,2		0	0	4	☐
59039			12-13	2,2		0	0	4	☐
59039			13-14	2,2		0	0	4	☐
59039			14-15	2,2		0	0	4	☐
59039			15-16	2,2		0	0	4	☐

Tabella di discontinuità/ Table of discontinuites

[1]) Da marker iniziale/ From starting marker

A - Inclusioni gassose/ Gas bubbles
B - Porosità/ Porosity
C - Tarli/ Wormholes
D - Inclusioni di scoria/ Slang inclusions
E - Inclusioni allineat/ Slang lines
F - Mancanza di fusione/ Lack of fusion
G - Mancanza di penetrazione/ Lack of penetration
H - Cricca/ Crack
I - Incisione/ Undercutting
L - Cordone irregolare/ Erratic weld bead
M - Difetto film/ Processing defect
N - Tungsteno/ Wolfarm
R - Riparazione/ Repair

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SIDER TEST S.r.l. SERGIO FABIO BIUBATO LEVEL II SNT-TC-1A LEVEL II ISO 9712	23/05/2024	27/05/2024	28/05/2024	ROSETTI MARINO Supply Management Dept. ☐ Witness ☐ Review		PAOLO AMANI LEVEL 3 SNT-TC-1A/ 1012/RG 11 ISO 9712 NDT-PRD-001119-C UT - PT - RT - MT

SIDERTEST
mechanical chemical non destructive tests
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RT 1037 / 24

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LAB N° 0864 L

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Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00002010**	**1724000839**

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Film N°	Tipo di Saldatura/ Weld type	Saldatore/ Welder	Posizione Film/ Film location	Densità/ Density	Discontinuità/ Discontinuity (mm)			Filo/ Wire	NC
					Tipo/ Type	Lunghezza/ Length	Distanza/ Distance [1]		
59039			16-17	2,2		0	0	4	☐
59040			1-2	2,6		0	0	4	☐
59040			2-3	2,6		0	0	4	☐
59040			3-4	2,6		0	0	4	☐
59040			4-5	2,6		0	0	4	☐
59040			5-6	2,6		0	0	4	☐
59040			6-7	2,6		0	0	4	☐
59040			7-8	2,6		0	0	4	☐
59040			8-9	2,6		0	0	4	☐
59040			9-10	2,6		0	0	4	☐
59040			10-11	2,6		0	0	4	☐
59040			11-12	2,6		0	0	4	☐
59040			12-13	2,6		0	0	4	☐
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SIDER TEST S.r.l. SERGIO FABIO BARBATO LEVEL II SNT-TC-1A LEVEL II ISO 9712	**23/05/2024**	**27/05/2024**	**28/05/2024**	ROSETTI MARINO Supply Management Dept. ☐ Witness ☒ Review		PAOLO AMANI LEVEL 3 SNT-TC-1A - 10123/RG 11 ISO 9712 NDT-PND-001119-C MT - PT - ST - VT

SIDERTEST
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Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00002010**	**1724000839**

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					Tipo/ Type	Lunghezza/ Length	Distanza/ Distance [1])		
59040			15-16	2,6		0	0	4	☐
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SIDER TEST S.r.l. SERGIO FABIO BARBATO LEVEL II SNT-TC-1A LEVEL II ISO 9712	**23/05/2024**	**27/05/2024**	**28/05/2024**	ROSETTI MARINO *Supply Management Dept.* ☐ Witness ☒ Review		PAOLO AMANI LEVEL 3 SNT-TC-1A/E 10122/RG-11 ISO 9712 NDT-PND-001119-C RT - UT

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724000839	123A90A	Q012400454

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani 21/06/2024

Sonia Emiliani

☒ REVIEW

☐ WITNESS

CUSTOMER

NOTE

raccortubi

00005072

07/06/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaals d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				FLANGE IN ACCIAIO INOX ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	
830	NR	1	0,00	BLIND 3" S.150 RF	CH-19713
840	NR	12	0,00	BLIND 3/4" S.150 RF	CH-17409
850	NR	6	0,00	BLIND 1" S.150 RF	DB152
860	NR	8	0,00	BLIND 1" S.300 RF	SL1602
910	NR	13	0,00	W.N. 2" S.150 RF SCH.10/S	DJ836
920	NR	4	0,00	W.N. 2" S.300 RF SCH.10/S	DL010
930	NR	6	0,00	W.N. 6" S.300 RF SCH.10/S	CH-3217
940	NR	17	0,00	W.N. 4" S.150 RF SCH.10/S	CH-20600
950	NR	20	0,00	W.N. 3/4" S.150 RF SCH.40/S	CH-18532
960	NR	54	0,00	W.N. 1" S.150 RF SCH.40/S	CH-19714
970	NR	8	0,00	W.N. 1.1/2" S.150 RF SCH.40/S	CH-20177
980	NR	14	0,00	W.N. 1/2" S.300 RF SCH.40/S	CH-18812
990	NR	18	0,00	W.N. 3/4" S.300 RF SCH.40/S	A-5735

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

raccortubi

00005072

07/06/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
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Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
1000	NR	2	0,00	W.N. 6" S.150 RF SCH.10/S	DK782
1010	NR	97	0,00	W.N. 1" S.300 RF SCH.40/S	DL364
1010	NR	30	0,00	W.N. 1" S.300 RF SCH.40/S	DG136
1010	NR	53	0,00	W.N. 1" S.300 RF SCH.40/S	DJ346
1020	NR	1	0,00	W.N. 3" S.300 RF SCH.10/S	CH-16463
1030	NR	6	0,00	W.N. 6" S.300 RF SCH.40/S	CH-16164
1040	NR	48	0,00	W.N. 4" S.300 RF SCH.10/S	DK476
1040	NR	2	0,00	W.N. 4" S.300 RF SCH.10/S	EA085
1040	NR	20	0,00	W.N. 4" S.300 RF SCH.10/S	DG350
1050	NR	16	0,00	W.N. 1.1/2" S.300 RF SCH.40/S	CH-18895
1060	NR	7	0,00	W.N. 10" S.150 RF SCH.10/S	DF309/1
1120	NR	3	0,00	W.N. 3" S.150 RF SCH.10/S	3289
1130	NR	4	0,00	W.N. 1/2" S.150 RF SCH.40/S	CH-16628
1140	NR	3	0,00	W.N. 1" S.150 FF SCH.40/S	CA048/1

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

ITALTEST NDT CONTROLLI E COLLAUDI INDUSTRIALI SETTIMO MILANESE – LEGNANO (MI) www.italtest.it	RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI LIQUID PENETRANT TEST REPORT	50 dal 1965 CERT. ISO 9001 LRC0100763/QMS	N° 4.134 / 2024 PAGINA DI PAGINE Page 1 of 2 Pages

CLIENTE Customer RACCORTUBI S.p.A.	ORDINE Order 1724000839 - 22.04.24	COMMESSA Job 00002010

OGGETTO
Object SEE PAGE 2

SPECIFICA GENERALE General specification	PIANO DI CONTROLLO Control Plan	FASE Phase	CRITERIO D'ACCETTAZIONE Acceptance Standards
ASME V ART.6			ASME VIII DIV.1 APP.8

PROCEDURA Procedure	MATERIALE Material	DISEGNO FIG. Drawing Fig.	% CONTROLLATA Extent %
	SEE PAGE 2		100% SURFACE

CONDIZIONE SUPERFICE Surface Conditions	SALDATO As Welded	MOLATO Ground	LAVORATO Machined	FORGIATO As Forged X	FUSO As Cast

STATO DEL MATERIALE Material Status	PRIMA DEL T.T. Before Heat Treatment	DOPO T.T. After Heat Treatment	DOPO RIPARAZIONE After Repair

DATI DELLA PROVA
Test Data

METODO DI PULIZIA
Precleaning Method SOLVENT AND PAPER

TECNICA Technique	CONTRASTO DI COLORE Color Contrasting X	FLUORESCENTE Fluorescent
	ILLUMINAZIONE White Light Intensity 1200 lx	ILLUMINAZIONE Black Light Intensity

METODO DI ISPEZIONE Liquid Penetrant Inspection Method						
MARCA Brand N.D.T.			PENETRANTE Penetrant	SPRAY Spray X	LOTTO Batch 210115Ps	SCADENZA Expiry 02/2025
TIPO Type	LAVABILE IN ACQUA Water Washable X			PENNELLO Brush	LOTTO Batch	SCADENZA Expiry
	POST EMULSIONABILE Post Emulsifiable		RIVELATORE Developer	SECCO Dry	LOTTO Batch	SCADENZA Expiry
	RIMOVIBILE CON SOLVENTE Solvent Removable			UMIDO Wet X	LOTTO Batch 230206W150s	SCADENZA Expiry 01/2027

TEMPO DI PENETRAZIONE Dwell Time 20 MINUTE	METODO DI PULIZIA Cleaning Method WATER AND PAPER
TEMPO DI SVILUPPO Developing Time 10 MINUTE	METODO DI PULIZIA Cleaning Method WATER AND PAPER

RISULTATI DELLA PROVA
Test Results

SENZA DIFETTI No Defects X	DIFETTI ACCETTABILI Accettable Defects	DIFETTI NON ACCETTABILI Unaccepptable Defects

OSSERVAZIONI O DESCRIZIONE DELLE INDICAZIONI
Description Of Defects, Size And Location

RISULTATI Results	CONFORME ALLA SPECIFICA According To Specification X	NON CONFORME ALLA SPECIFICA Not According To Specification	SCARTO Scrap

NOTE
Notes

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 DATA Date 10 / 06 / 2024 RT	ROSETTI MARINO Supply Management Dept. ☑ Witness ☒ Review DATA Date	DATA Date

ITALTEST NDT
CONTROLLI E COLLAUDI INDUSTRIALI
SETTIMO MILANESE – LEGNANO (MI) www.italtest.it

RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI

LIQUID PENETRANT TEST REPORT

5 dal 1985
CERT. ISO 9001 LRC0100763/QMS

N° 4.134 / 2024

PAGINA 2 DI 2 PAGINE
Page 2 of 2 Pages

CLIENTE Customer	ORDINE Order	COMMESSA Job
RACCORTUBI S.p.A.	1724000839 - 22.04.2024	00002010

ITEM Item	Q.TÀ Q.ty	DESCRIZIONE Description	MATERIALE Material	COLATA Heat
830	1	BLIND 3" S.150 RF	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	CH-19713
840	12	BLIND 3/4" S.150 RF	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	CH-17409
850	6	BLIND 1" S.150 RF	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	DB152
860	8	BLIND 1" S.300 RF	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	SL1602
910	13	W.N. 2" S.150 RF SCH.10/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	DJ836
920	4	W.N. 2" S.300 RF SCH.10/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	DL010
930	6	W.N. 6" S.300 RF SCH.10/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	CH-3217
940	17	W.N. 4" S.150 RF SCH.10/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	CH-20600
950	20	W.N. 3/4" S.150 RF SCH.40/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	CH-18532
960	54	W.N. 1" S.150 RF SCH.40/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	CH-19714
970	8	W.N. 1.1/2" S.150 RF SCH.40/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	CH-17777
980	14	W.N. 1/2" S.300 RF SCH.40/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	CH-18812
990	18	W.N. 3/4" S.300 RF SCH.40/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	A-5735
1000	2	W.N. 6" S.150 RF SCH.10/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	DK782
1010	30	W.N. 1" S.300 RF SCH.40/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	DG136
1010	53	W.N. 1" S.300 RF SCH.40/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	DJ346
1010	97	W.N. 1" S.300 RF SCH.40/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	DL364
1020	1	W.N. 3" S.300 RF SCH.10/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	CH-16463
1030	6	W.N. 6" S.300 RF SCH.40/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	CH-16164
1040	20	W.N. 4" S.300 RF SCH.10/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	DG350
1040	48	W.N. 4" S.300 RF SCH.10/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	DK476
1040	2	W.N. 4" S.300 RF SCH.10/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	EA085
1050	16	W.N. 1.1/2" S.300 RF SCH.40/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	CH-18895
1060	7	W.N. 10" S.150 RF SCH.10/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	DF309/1
1120	3	W.N. 3" S.150 RF SCH.10/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	3289
1130	4	W.N. 1/2" S.150 RF SCH.40/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	CH-16628
1140	3	W.N. 1" S.150 FF SCH.40/S	ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	CA048/1

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT	ROSETTI MARINO Supply Management Dept. ☐ Witness ☐ Review	
DATA Date 10 / 06 / 2024	DATA Date	DATA Date

raccortubi

00005072

12/06/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator
Colaulo Stefano

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
			FLANGE IN ACCIAIO INOX ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	
830	1	NR	BLIND 3" S.150 RF	CH-19713
840	12	NR	BLIND 3/4" S.150 RF	CH-17409
850	6	NR	BLIND 1" S.150 RF	DB152
860	8	NR	BLIND 1" S.300 RF	SL1602
910	13	NR	W.N. 2" S.150 RF SCH.10/S	DJ836
920	4	NR	W.N. 2" S.300 RF SCH.10/S	DL010
930	6	NR	W.N. 6" S.300 RF SCH.10/S	CH-3217
940	17	NR	W.N. 4" S.150 RF SCH.10/S	CH-20600
950	20	NR	W.N. 3/4" S.150 RF SCH.40/S	CH-18532
960	54	NR	W.N. 1" S.150 RF SCH.40/S	CH-19714
970	8	NR	W.N. 1.1/2" S.150 RF SCH.40/S	CH-17777
980	14	NR	W.N. 1/2" S.300 RF SCH.40/S	CH-18812
990	18	NR	W.N. 3/4" S.300 RF SCH.40/S	A-5735

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

raccortubi

00005072

12/06/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002010
Ordine N. P.O. number: 1724000839 - 22.04.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator
Colaulo Stefano

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	Q.ta' *Q.ty*	U.M.	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
1000	2	NR	W.N. 6" S.150 RF SCH.10/S	DK782
1010	30	NR	W.N. 1" S.300 RF SCH.40/S	DG136
1010	53	NR	W.N. 1" S.300 RF SCH.40/S	DJ346
1010	97	NR	W.N. 1" S.300 RF SCH.40/S	DL364
1020	1	NR	W.N. 3" S.300 RF SCH.10/S	CH-16463
1030	6	NR	W.N. 6" S.300 RF SCH.40/S	CH-16164
1040	20	NR	W.N. 4" S.300 RF SCH.10/S	DG350
1040	48	NR	W.N. 4" S.300 RF SCH.10/S	DK476
1040	2	NR	W.N. 4" S.300 RF SCH.10/S	EA085
1050	16	NR	W.N. 1.1/2" S.300 RF SCH.40/S	CH-18895
1060	7	NR	W.N. 10" S.150 RF SCH.10/S	DF309/1
1120	3	NR	W.N. 3" S.150 RF SCH.10/S	3289
1130	4	NR	W.N. 1/2" S.150 RF SCH.40/S	CH-16628
1140	3	NR	W.N. 1" S.150 FF SCH.40/S	CA048/1

ROSETTI MARINO
Supply Management Dept.
☑ Witness ☑ Review

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2015 CERTIFICATE No. 04 100 11022

ADM. OFFICE: 501, SUKH SAGAR, N. S. PATKAR MARG,
Chowpatty MUMBAI 400 007, INDIA
Tel.: 91-22- 66290600. Fax: 91-22-66290633/34
Website : www.chandansteel.net
Email : csl@chandansteel.net
L/c. No. :
L/c. Date:

Works : Plot # 31 to 36, 45 to 49/2, 142 (Exp. Area), G.I.D.C. Umbergaon,
Survey No. 102/2 & 102/3, Village - Dehri, Dist. - Valsad, Gujarat - 396171 India.
Tel. : (+91) 260 7128999/800/802 .
Email : info@chandansteel.com
GSTIN - 24AAACC4713B1ZG

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA
VIALE DE GASPERI, 194
20010 MARCALLO CON CASONE
(MILANO) - ITALIA

Test Certificate No. : 17791/23-24 - 18
Date of Issue : 16.11.2023
P. O. No. : 03000175
Invoice No. & Date : 17791/23-24 & 16.11.2023

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES (HS Code : 7307.21.00)

Po Sr No.	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
18	CH-19713	66	5	336.26	ASTM/ASME A/SA182 F316/316L	3" BLRF 150 LBS	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
18	0.023	0.44	1.68	0.039	0.024	16.66	2.03	10.10	-	-	0.070	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm2 (Rp0.2)	Tensile Strength N/mm² (R_m)	Elongation %	Reduction of Area %	Hardness (H. B. W.)
18	263	570	60	76	152-155
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Remarks:

1. The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions Inspection OK.
3. PMI Test 100%:- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Inter-Granular Corrosion Test (ASTM A262 - 17 (Pr.E)):- Satisfactory.
7. The material conforms to ASTM A 182 - 22, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification.
8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
9. Surface roughness quality checked by comparator & found 125 - 250 AARH
10. Visual , Dimension and PMI performed by CSL.
11. Mechanical Testing perfomed by CSL.
12. Material does not contain steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No 833/2014 and further amendment.

CHANDAN STEEL LTD. Q. A.

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.

V.Y.NARAYANAN
WORKS INSPECTOR

ROSETTI MARINO
Supply Management Dept.

☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 830 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: BLIND 3" S.150 RF

raccortubi Heat num. or Pos. marking: CH-19713 - Qty:1,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2015 CERTIFICATE No. 04 100 011022

ADM. OFFICE: 504, SUKH SAGAR, N. S. PATKAR MARG,
MUMBAI 400 007, INDIA
Tel.: 91-22- 66290600. Fax.: 91-22-66290633/34
Website : www.chandansteel.net
Email : csl@chandansteel.net

WORKS: Plot No. 35, G. I. D. C, Umbergaon
Dist Valsad, Gujarat - 396 171,INDIA
Tel.: 91-260-256 2066 / 4367 / 1166. Fax.: 91-260-256 2287
E-mail : exports@chandansteel.net

L/c. No. :
L/c. Date:

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA
VIALE DE GASPERI, 194
20010 MARCALLO CON CASONE
(MILANO) - ITALIA

Test Certificate No. : EXP/22-23/0000- 24
Date of Issue : 20.10.2022/Rev.01 Dt. 22.10.2022
P. O. No. : 00000200 S DTD 24.05.2022 Dt. 26-05-2022
Invoice No. & Date : EXP/22-23/0000 Dt.20.10.2022

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES

Po Sr No.	Part Code	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
52	-	CH-17409	200	53	134.14	ASTM/ASME A/SA182 F316/316L	3/4" BLRF 150 LBS	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	N	OTHERS
52	0.021	0.45	1.67	0.041	0.010	16.74	10.07	2.02	-	-	0.078	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm² ($R_{p0.2}$)	Tensile Strength N/mm² (R_m)	Elongation %	Reduction of Area %	Hardness (H. B. W.)
52	268	576	55	72	162-166
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Remarks:
1.The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions inspection OK.
3. PMI Test 100%:- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Inter-Granular Corrosion Test (ASTM A262 - 17 (Pr.E)):- Satisfactory.
7. The material conforms to ASTM A 182 - 20, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification.
8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
9. Surface roughness quality checked by comparator & found 125 - 250 AARH
10. Visual , Dimension and PMI performed by CSL.
11. Mechanical Testing perfomed by CSL.

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.

CHANDAN STEEL LTD. Q. A. PACKING DIVISION

V. NARAYAN
SR. MANAGER Q. A.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

F/QA/18, Rev. 00, 11.01.2018

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 840 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: BLIND 3/4" S.150 RF

raccortubi Heat num. or Pcs. marking: CH-17409 - Qty:12,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CTCERT202300002669 1.0001

VIRAJ PROFILES PRIVATE LIMITED (formerly, Viraj Profiles Limited)(Forgings Div)
Survey No-140/1 & G-75 MIDC, Tarapur Ind.Area, Boisar, Dist.Palghar,Maharashtra-401506,INDIA
Email-vflqc@viraj.com,web.www.viraj.com(A01)

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

(A06)CUSTOMER :	Manufacturer's Symbol (A04)	(A03)MTR NO.	12/230012245/28 / Rev - 01
RACCORTUBI SPA		INVOICE NUMBER	910019372
VIALE DE GASPERI 194		(Z02) DATE	14.04.2023
I-20010 MARCALLO CON CASONE MI		MATERIAL SPEC.	ASTM A182/A182M-23/ASME SA182/SA182M-21
			ASME SECT.II PART A-2021
		(B02) GRADE	F316/316L
Italy		DIMENSIONAL SPEC.	ASME B16.5-2020

(B01) : STAINLESS STEEL FORGED FLANGES | (B04) DELIVERY CONDITION : HOT FORGED AND FULLY MACHINED

ISO 9001:2015-TUV NORD REG.No-04100031210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PED (2014/68/EU) BY CERTIFICATION BODY FOR PRESSURE EQUIPMENT OF TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION NO. -0045)

(A07)ORDER NO: 00000024	(A08)Sales Order No. 100019565/000080	(A09)Article No:8

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
1" BLRF 150#,	100	DB152

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%N								
MIN						16.00	10.00	2.00									
MAX	0.030	2.00	1.00	0.030	0.045	18.00	14.00	3.00	0.1000								
HEAT	0.019	1.58	0.36	0.027	0.036	16.60	10.01	2.01	0.0630								

MECHANICAL PROPERTIES

Test Specification ASTM - A370

(C01) Sample location : Mid thickness-forging	(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Sample Shape Round		ASTM E10	

Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13)	Reduction of Area	(C32) Hardness	(C40) Charpy V-Notch 10x10x55mm Values At +20°C (Joules)			
							(C42) Single values			(C43)
		Rp=0.2%	Rp = 1%	Elongation%						
	MPA	MPA	MPA	LO=4D	%	BHN	1	2	3	AVG
Req.	515 MIN	205 MIN		30 MIN	50 MIN	237 MAX				
T	549.61	275.63	329.93	58.40	71.67	150	203	172	190	188

Other applicable Specifications :: NACE MR 0175-2021 / ISO 15156-2020 NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10

Melting Process : Electrical induction furnace & Argon Oxygen decarburization(IRS) Concast

Heat Treatment	: Solution Annealed at 1080°C and water Quenched
Dimensional Inspection	: Conform with the specification (100% inspected)
Surfacequality	: Satisfactory
PMI Test	: No objection (100% tested with mobile spectro)
Corrosion Test	: Passed IGC test in accordance with ASTM A262 Practice E
Micro Observation	: No carbide precipitation observed on grain boundaries
Radioactitivity Test	: We here by certify that all the material is free from radioactive contamination
Mercury Contamination	: Free from mercury contamination

we certify that the above material has been inspected and tested and complies with the order/contract and is of Indian origin

VF 1

(Z03)Inspector's Stamp

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

VIJAY KUMAR PILLAI (GM, QAD)

VIRAJ PROFILES LTD. QUALITY ASSURANCE

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 850 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: BLIND 1" S.150 RF

raccortubi Heat num. or Pcs. marking: DB152 - Qty:6,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

GOOD LUCK ENGINEERING CO.

ADM. OFFICE: II F -166-167,
Nehru Nagar, Ambedkar Road, Ghaziabad

Works : Khasra No. 2839, Village : Dhoom Manikpur, G.T. Road, Dadri, G.B. Nagar-203207, U.P. (India)
qc1@goodluckindia.com

ISO 9001 - 2015
CERTIFIED COMPANY
CERTIFICATE NO.-IND.21.6268/QM/U

MATERIAL TEST CERTIFICATE

(AS PER EN - 10204 - 3.1 ☑ / 3.2 ☐)

Entry No. : 5446

CUSTOMER	CUSTOMER P.O. No. & Dt.	OUR W.O. No. & Dt.	SPCN. No.	QAP NO.	DOC. NO.	PROJECT:	TEST CERTIFICATE No & Dt.
RACCORTUBI S.P.A Viale De Gasperi 194 20010 Marcallo con Casone (MI) ITALY	00000295 S 14/10/22	Exp/1391/22-23 18.10.2022					GLECO/J-1391-9 Date 28.01.2023

STEEL MELTING PROCESS	ORDER STATUS	DIMENSIONS AS PER	INSPECTION AGENCY	DATE OF INSPN. & TESTING
EF-AOD	PARTIAL	ASME B16.5 (Ed.2020)	M/S RACCORTUBI	27 & 28.01.2023

Item Sr.No.	Item Code	ITEM DESCRIPTION	MATERIAL SPEC.	QUANTITY (NOS)	HEAT NUMBER	BATCH NUMBER	HEAT TREATMENT CONDITION	TEMP °C	SOAKING TIME (Hrs)	COOLING MEDIUM	DELIVERY STATUS
9.000		1.0 in x 300 # x BLRF (NACE)	ASTM A 182 Gr.F316/316L (Ed.2021)	100	SL1602	GJ2200C	Solution Treat & Quenched	1080	04 Hrs	Stirred Water & cooled Below 260°C	Complete

GASKET FACE FINISH : 125-250 AARH Total Qty Pc 100

Report Type	Heat No	Batch No	C%	Mn%	Si%	S%	P%	Cr%	Ni%	Mo%	N%
Ladle	SL1602	-	0.0220	1.5300	0.3100	0.0140	0.0430	17.1800	10.0300	2.0400	0.0600
Product	SL1602	GJ2200C	0.0240	1.5500	0.3400	0.0120	0.0400	17.1400	10.0600	2.0600	0.0600
Required Value	-	Min	-	-	-	-	-	16.0000	10.0000	2.0000	-
		Max	0.0300	2.0000	1.0000	0.0300	0.0450	18.0000	14.0000	3.0000	0.1000

Good Luck Engg. Co. Dadri (U.P.) Nikhil Gupta Asst. Manager (Q.C.)

For Raccortubi S.P.A
Authorised Signatory
28/01/23

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

raccortubi Heat num. or Pcs. marking: SL1602 - Qty:8.00
Customer: ROSETTI MARINO S.p.A.
Description: BLIND 1" S.300 RF
Order: 1724000839 - 22.04.24 - Item n.: 860 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010
Protocol: CTCERC20240000572 * CERTIFIED TRUE COPY * Issued 03-06-2024

Customer: ROSETTI MARINO S.p.A.

Description: BLIND 1" S.300 RF

Heat num. or Pos. marking: SL1602 - Qty:8,00

Order: 1724000839 - 22.04.24 - Item n.: 860 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002010

Protocol: CTCERC20240000072 * CERTIFIED TRUE COPY * Issued 03-06-2024

CTCERT20230000220 9.1.0002

GOODLUCK

ADM. OFFICE: II F -166-167,
Nehru Nagar, Ambedkar Road, Ghaziabad

GOOD LUCK ENGINEERING CO.

Works : Khasra No. 2839, Village : Dhoom Manikpur, G.T. Road, Dadri, G.B. Nagar-203207, U.P. (India)
qc1@goodluckindia.com

ISO 9001 - 2015
CERTIFIED COMPANY
CERTIFICATE NO.-IND.21.6268/QM/U

MATERIAL TEST CERTIFICATE

Entry No. : 5446

MECHANICAL TEST REPORT AT ROOM TEMPERATURE IN AS DELIVERED CONDITION	Batch No	Gauge Dia / Size (mm)	Yield Strength (N / mm sq.) (0.2% Proof Stress)	Tensile strength (n/mm Sq.)	Elongation % On GL = 4D	Reduction in Area %	Hardness BHN	Impact Test10X10X55 mm (Charpy 2mm V-Notch) 01	02	03	Avg(Joules)	Temp °C	Grain Size as per ASTM E-112
	GJ2200C	12.45	320.23	587.09	51.80	71.04	174, 176	- - -	- - -	- - -	- - -	- - -	
	REQUIRED	MIN	205.00	515.00	30.00	50.00	-	-	-	-	-	-	
		MAX	-	-	-	-	-	-	-	-	-	-	

SUPPORTING TESTING	TEST STANDARD	ACCEPTANCE LEVEL	RELEVANT REPORT	SEAL/STAMP OF TPI WITNESS	SEAL / STAMP of Incharge Quality
				VIMAL KUMAR Prepared by:	NIKHIL GUPTA Inspected by:

(1) No Weld repair performed on forging.
(2) Hardness Test carried out on job & found satisfactory.
(3) Material comply all the requirements of PO & Specification.
(4) Material conformed all the requirements of ASTM A961/A961M (Ed. 2021)
(5) No Chinese and East European material is used.
(6) Material 100% visual & dimensional checked & found surface free from all types of defects.
(7) PMI carried out on job (PMI Report No. GLECO/PMI/J-1391/9 DATED 28.01.2023 enclosed) & found satisfactory.
(8) IGC test carried out as per ASTM A262 Practice E Test piece Bend over mandrel Dia = 1t X 180° and reviewed under 20X Mag. Observed "Bend Specimen free of any crack and Grain dropping" Microscopic Structure observed under magnification of 250 X and observed "Step Structure" - Found satisfactory.
(9) Material comply all the requirements of NACE MR0175/ISO 15156 (Ed 2015).
(10) Packing carried out as per PO & Spec.RT_FL_EXEU_2011 and found satisfactory.
(11) Material is free from Mercury & Radioactive Contamination.

Good Luck Engg. Co. * Dadri (U.P.) * Nikhil Gupta Asst. Manager (Q.C.)

We hereby certify that material declared above meets the requirement of P.O./ relevant specification — Identification Mark :

Doc No	Doc Rev No	Date	Effective Date	Doc. Retention Period	Doc. Prepared by	Doc. Approved by	Recorded document will be prepared, Maintained And preserved by incharge Quality
QA 11 TCFP 08	04	13/08/2018	13/08/2018	AS SPECIFIED BY CUSTOMER / COMPANY PROCEDURE	MR	Dir.works	

Document Route: (01) Original copy - Forwarded to CUSTOMER as self certified authentic record from GOOD LUCK ENGG. CO.
(02) 1st Copy - Inchange quality to maintain and preserve the record.

CONTROLLED COPY

For Raccortubi S.P.A
Authorised Signatory
28/01/23

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

VIRAJ PROFILES PRIVATE LIMITED (formerly, Viraj Profiles Limited)(Forgings Div)
Survey No-140/1 & G-75 MIDC, Tarapur Ind.Area, Boisar, Dist.Palghar,Maharashtra-401506,INDIA
Email-vflqc@viraj.com,web.www.viraj.com(A01)

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

(A06)CUSTOMER : M/S. RACCORTUBI SPA VIALE DE GASPERI 194 I-20010 MARCALLO CON CASONE MI Italy	Manufacturer's Symbol (A04)	(A03)MTR NO.	100028548 / 52 REV.1
		INVOICE NUMBER	
		(Z02) DATE	23.12.2023
		MATERIAL SPEC	ASTM A182/A182M- 23 / ASME SA182/SA182M-23
		(B02) GRADE	F316/316L
		DIMENSIONAL SPEC	ASME B16.5-2020

(B01) STAINLESS STEEL FORGED FLANGES | (B04) DELIVERY CONDITION : HOT FORGED & FULLY MACHINED

ISO 9001:2015-TUV NORD REG No-04100031210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE(PED) 2014/68/EU,CERTIFING BODY-TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION No. 0045)

(A07)ORDER NO. 245	(A08) Sales Order No. 100028548 / 510	(A09)Article No: 51

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
2" WNRF S10S 150#	200	DJ836

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%N								
MIN						16.00	10.00	2.00									
MAX	0.030	2.00	1.00	0.030	0.045	18.00	14.00	3.00	0.1000								
HEAT	0.016	1.58	0.35	0.022	0.036	17.40	10.03	2.01	0.0700								
PROD	0.015	1.58	0.34	0.019	0.036	17.40	10.02	2.01	0.0640								

MECHANICAL PROPERTIES

Test Specification ASTM - A370

(C01) Sample location : Mid thickness-forging	(C03) Test Temp . RT	(C02) Test Direction Tr	(C10) Specimen Shape - Round		ASTM E10	

Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13) Elongation%	Reduction of Area	(C22) Hardness			(C40) Charpy V-Notch 10x10x55mm (Values in Joules)			
		Rp=0.2%	Rp = 1%						(C42) Single values			(C43)
	N/mm2	N/mm2	N/mm2	Lo=4D	%	BHN-1	BHN-2	AVG	1	2	3	AVG
Req	515 MIN	205 MIN		30 MIN	50 MIN							
1	565.94	286.34	327.09	60.60	71.27	154	156	155	174	190	196	187

Other applicable Specifications :: NACE MR 0175 / ISO 15156-2015 & NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10

Melting Process : Induction furnace/Aragon Oxygen Decarburisation (AOD-IRS), Concast

Heat Treatment	Solution Annealed at 1080°C and water Quenched
Dimension	Conform with the specification (100% inspected)
Surface quality	Satisfactory Roughness Value - RA 3.2 TO 6.3 µm / 125 TO 250 AARH
PMI Test	No objection (100% tested with mobile spectro)
Inter Granular Corrosion Test	Passed IGC test in accordance with ASTM A262 practice E
Radioactivity Test	All the above material is tested for Radioactivity and found with in the limit of background radiation
Liquid penetrant test	No objection(test method-ASTM E 165 & accepted as per ASME Sec VIII division 1-appendix 8)

HS Code: 73072100 The material is manufactured /melted in Viraj Profiles Private Limited Steel Mill and is of Indian Origin. Material does not contain steel products originating in Russia mentioned The Russia (Sanctions (EU Exit) (Amendment) Regulations 2023 Regulation 46IA and 46IB and Annex XVII to the (EU) Regulation No 833/ 2014 and further amendment

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

VIRAJ PROFILES PVT. LTD. VIRAJ QUALITY ASSURANCE

VIJAY KUMAR PILLAI (PRESIDENT)

VIRAJ PROFILES PRIVATE LIMITED (formerly, Viraj Profiles Limited)(Forgings Div)
Survey No-140/1 & G-75 MIDC, Tarapur Ind.Area, Boisar, Dist.Palghar,Maharashtra-401506,INDIA
Email-vfqc@viraj.com,web.www.viraj.com(A01)

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

(A06)CUSTOMER : M/S. RACCORTUBI SPA VIALE DE GASPERI 194 I-20010 MARCALLO CON CASONE MI Italy	Manufacturer's Symbol (A04)	(A03)MTR NO	100028548 / 53 REV.1
		INVOICE NUMBER	
		(Z02) DATE	23.12.2023
		MATERIAL SPEC	ASTM A182/A182M- 23 / ASME SA182/SA182M-23
		(B02) GRADE	F316/316L
		DIMENSIONAL SPEC	ASME B16.5-2020

(B01) STAINLESS STEEL FORGED FLANGES | (B04) DELIVERY CONDITION : HOT FORGED & FULLY MACHINED

ISO 9001:2015-TUV NORD REG No-04100031210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE(PED) 2014/68/EU,CERTIFING BODY-TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION No. 0045)

(A07)ORDER NO. 245	(A08) Sales Order No. 100028548 / 520	(A09)Article No: 52

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
2" WNRF S10S 300#	150	DL010

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%N								
MIN						16.00	10.00	2.00									
MAX	0.030	2.00	1.00	0.030	0.045	18.00	14.00	3.00	0.1000								
HEAT	0.026	1.51	0.35	0.021	0.038	16.76	10.07	2.01	0.0790								
PROD	0.023	1.51	0.34	0.017	0.039	16.76	10.05	2.01	0.0770								

MECHANICAL PROPERTIES

Test Specification ASTM - A370

(C01) Sample location Mid thickness-forging	(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Specimen Shape - Round		ASTM E10	

Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13) Elongation%	Reduction of Area	(C32) Hardness			(C40) Charpy V-Notch 10x10x55mm (Values in Joules)			
		Rp=0.2%	Rp = 1%						(C42) Single values			(C43)
	N/mm2	N/mm2	N/mm2	Lo=4D	%	BHN-1	BHN-2	AVG	1	2	3	AVG
Req	515 MIN	205 MIN		30 MIN	50 MIN							
T	571.20	268.79	310.69	58.40	68.13	155	153	154	194	178	192	188

Other applicable Specifications :: NACE MR 0175 / ISO 15156-2015 & NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10

Melting Process : Induction furnace/Aragon Oxygen Desarburisation (AOD-IRS), Concast

Heat Treatment	: Solution Annealed at 1080°C and water Quenched
Dimension	: Conform with the specification (100% inspected)
Surface quality	: Satisfactory Roughness Value - RA 3.2 TO 6.3 µm / 125 TO 250 AARH
PMI Test	: No objection (100% tested with mobile spectro)
Inter Granular Corrosion Test	: Passed IGC test in accordance with ASTM A262 practice E
Radioactivity Test	: All the above material is tested for Radioactivity and found with in the limit of background radiation.
Liquid penetrant test	: No objection(test method-ASTM E 165 & accepted as per ASME Sec VIII division 1-appendix 8)

HS Code: 73072100 The material is manufactured /melted in Viraj Profiles Private Limited Steel Mill and is of Indian Origin. Material does not contain steel products originating in Russia mentioned The Russia (Sanctions (EU Exit) (Amendment) Regulations 2023 Regulation 461A and 46IB and Annex XVII to the (EU) Regulation No 833/ 2014 and further amendment.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

VIRAJ PROFILES PVT. LTD. QUALITY ASSURANCE

VIJAY KUMAR PILLAI (PRESIDENT)

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2008 CERTIFICATE No. 04 100 011022-B3

ADM. OFFICE: 504, SUKH SAGAR, N. S. PATKAR MARG,
MUMBAI 400 007, INDIA
Tel.: 91-22- 66290600. Fax.: 91-22-66290633/34
Website : www.chandansteel.net
Email : csl@chandansteel.net

WORKS: Plot No. 35, G. I. D. C., Umbergaon
Dist Valsad, Gujarat - 396 171.
Tel.: 91-260-256 2066 / 4367 / 1166. Fax.: 91-260-256 2287
E-mail : exports@chandansteel.net

I/c. No. :
I/c. Date:

179014

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA VIALE DE GASPERI, 194 20010 MARCALLO CON CASONE (MILANO) - ITALIA	Test Certificate No. : EXP/ 0004 -30/2016-17 Date of Issue : 26.03.2016 P. O. No. : OS000011 S Dtd. 26.01.2016 Invoice No. & Date : EXP/ 0004 /2016-17

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES

Po Sr No.	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
83	CH-3217	7	67	132.86	ASTM A 182 F316/316L	6" WNRF 300 LBS S10S	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
83	0.024	0.39	1.65	0.044	0.016	16.71	2.05	10.03	-	-	0.0510	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm² ($R_{p0.2}$)	Tensile Strength N/mm² (R_m)	Elongation %	Reduction of Area %	Hardness (B. H. N.)
83	271	580	50	76	159-163
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Remarks:
1.The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions inspection 100%:- OK.
3. PMI Test 100%:- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Micro Structure Reveals Austenitic grains with annealing twins and is free from carbide precipitation (At 500 X).
7. Inter-Granular Corrosion Test (ASTM A262 - 13 (Pr.E)):- Satisfactory.
6. The material conforms to ASTM A 182 - 13, ASME SECTION II PART A SA 182 - 13 & Dimension confirms to ANSI B16.5 - 09 Specification.
9. The material hardness conforms to NACE MR 0175-09 & NACE MR 0103-07.
10. Surface roughness quality checked by comparator & found 125 - 250 AARH
-

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.

V.Y. NARAYAN
SR MANAGER Q.A.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

F/QA/18, Rev. 0, 25.08.2012

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 930 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010
Description: W.N. 6" S.300 RF SCH.10/S

raccortubi Heat num. or Pos. marking: CH-3217 - Qty:6,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2015 CERTIFICATE No. 04 100 811022

ADM. OFFICE: 504, SUKH SAGAR, N. S. PATKAR MARG,
Chowpatty MUMBAI 400 007, INDIA
Tel.: 91-22- 66290600. Fax.: 91-22-66290633/34
Website : www.chandansteel.net
Email : csl@chandansteel.net
L/c. No. :
L/c. Date:

Works : Plot # 31 to 36, 45 to 49/2, 142 (Exp. Area), G.I.D.C. Umbergaon,
Survey No. 102/2 & 102/3, Village - Dehri, Dist. - Valsad, Gujarat - 396171 India.
Tel. : (+91) 260 7128999/800/802 .
Email : info@chandansteel.com
GSTIN - 24AAACC4713B1ZG

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA
VIALE DE GASPERI, 194
20010 MARCALLO CON CASONE
(MILANO) - ITALIA

Test Certificate No. : 1779F/23-24 - 58
Date of Issue : 16.11.2023
P. O. No. : 06000175
Invoice No. & Date : 1779F/23-24 & 16.11.2023

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES (HS Code : 7307.21.00)

Po Sr No.	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
58	CH-20600	317	23,24&25	2130.00	ASTM/ASME A/SA182 F316/316L	4" WNRF 150 LBS 10S	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
58	0.022	0.43	1.78	0.042	0.024	16.90	2.02	10.05	-	-	0.080	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm2 (Rp0.2)	Tensile Strength N/mm² (R_m)	Elongation %	Reduction of Area %	Hardness (H. B. W.)
58	268	559	63	75	151-157
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Remarks:
1. The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions inspection OK.
3. PMI Test 100%:- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Inter-Granular Corrosion Test (ASTM A262 - 17 (Pr.E)):- Satisfactory.
7. The material conforms to ASTM A 182 - 22, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification.
8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
9. Surface roughness quality checked by comparator & found 125 - 250 AARH
10. Visual , Dimension and PMI performed by CSL.
11. Mechanical Testing perfomed by CSL.
12. Material does not contain steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No 833/2014 and further amendment.

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.

V.Y.NARAYANAN
WORKS INSPECTOR

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 940 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 4" S.150 RF SCH.10/S

raccortubi Heat num. or Pos. marking: CH-20600 - Qty:17,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CTCERT202300002094.1

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001:2015 CERTIFICATE No. 01 100 011022

ADM. OFFICE: 104, SUKH SAGAR, N. S. PATKAR MARG, MUMBAI 400 007, INDIA
Tel: 91-22- 66290600. Fax: 91-22-66290633/34
Website : www.chandansteel.net
Email : cs10@chandansteel.net

WORKS: Plot No. 35, G. I. D. C., Umbergaon, Dist Valsad, Gujarat - 396 171, INDIA
Tel: 91-260-256 2064/ 4367 / 1166. Fax: 91-260-256 2267
E-mail : exports@chandansteel.net

L/c. No. :
L/c. Date:

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA VIALE DE GASPERI, 194 20010 MARCALLO CON CASONE (MILANO) - ITALIA	Test Certificate No. : EXP/22-23/01571 - 30 Date of Issue : 18.03.2023 P. O. No. : 00000294 Dt. 17-10-2022 Invoice No. & Date : EXP/22-23/01571 Date- 18.03.2023

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES

Po Sr No.	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
27	CH-18532	102	9 & 10	76.26	ASTM/ASME A/SA182 F316/316L	3/4" WNRF 150 LBS 40S	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
"	"	"	"	"	"	"	
"	"	"	"	"	"	"	
"	"	"	"	"	"	"	
"	"	"	"	"	"	"	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
27	0.019	0.55	1.62	0.039	0.003	16.68	2.05	10.12	-	-	0.074	-
"	"	"	"	"	"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"	"	"	"	"	"

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm2 (Rp0.2)	Tensile Strength N/mm² (R_m)	Elongation %	Reduction of Area %	Hardness (H. B. W.)
27	257	558	56	70	162-166
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

Remarks:

1. The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimentions inspection OK.
3. PMI Test 100%- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Inter-Granular Corrosion Test (ASTM A262 - 17 (Pr.E)):- Satisfactory,
7. The material conforms to ASTM A 182 - 22, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification.
8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
9. Surface roughness quality checked by comparator & found 125 - 250 AARH
10. Visual, Dimension and PMI performed by CSL.
11. Mechanical Testing performed by CSL.

We hereby certify that, the material described herein, and supplied are in compliance with the requirements of the order.

V.Y.NARAYANAN
WORKS INSPECTOR

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 950 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 3/4" S.150 RF SCH.40/S

raccortubi Heat num. or Pos. marking: CH-18532 - Qty:20,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2015 CERTIFICATE No. 04 100 011022

ADM. OFFICE: 504, SUKH SAGAR, N. S. PATKAR MARG,
Chowpatty MUMBAI 400 007, INDIA
Tel.: 91-22- 66290600, Fax: 91-22-66290633/34
Website : www.chandansteel.net
Email : csl@chandansteel.net
I/c. No. :
I/c. Date:

Works : Plot # 31 to 36, 45 to 49/2, 142 (Exp. Area), G.I.D.C. Umbergaon,
Survey No. 102/2 & 102/3, Village - Dehri, Dist. - Valsad, Gujarat - 396171 India.
Tel. : (+91) 260 7128999/800/802 .
Email : info@chandansteel.com
GSTIN - 24AAACC4713B1ZG

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA
VIALE DE GASPERI, 194
20010 MARCALLO CON CASONE
(MILANO) - ITALIA

Test Certificate No.	: 1779F/23-24 - 45
Date of Issue	: 16.11.2023
P. O. No.	: 00000175
Invoice No. & Date	: 1779F/23-24 & 16.11.2023

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES (HS Code : 7307.21.00)

Po Sr No.	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
45	CH-19714	217	14	238.00	ASTM/ASME A/SA182 F316/316L	1" WNRF 150 LBS 40S	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
45	0.022	0.40	1.75	0.039	0.021	17.10	2.03	10.04	-	-	0.074	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm2 (Rp0.2)	Tensile Strength N/mm² (R_m)	Elongation %	Reduction of Area %	Hardness (H. B. W.)
45	255	561	63	72	162-164
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Remarks:
1. The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions inspection OK.
3. PMI Test 100%:- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Inter-Granular Corrosion Test (ASTM A262 - 17 (Pr.E)):- Satisfactory.
7. The material conforms to ASTM A 182 - 22, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification.
8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
9. Surface roughness quality checked by comparator & found 125 - 250 AARH
10. Visual, Dimension and PMI performed by CSL.
11. Mechanical Testing perfomed by CSL.
12. Material does not contain steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No 833/2014 and further amendment.

CHANDAN STEEL LTD. Q. A. Forging Division

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.

V.Y.NARAYANAN
WORKS INSPECTOR

ROSETTI MARINO
Supply Management Dept.

Witness Review

F/QA/18, Rev. 00, 11.01.2018

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 960 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1" S.150 RF SCH.40/S

raccortubi Heat num. or Pos. marking: CH-19714 - Qty:54,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2015 CERTIFICATE No. 04 100 011022

ADM. OFFICE: 504, SUKH SAGAR, N. S. PATKAR MARG,
MUMBAI 400 007, INDIA
Tel.: 91-22- 66290600. Fax: 91-22-66290633/34
Website : www.chandansteel.net
Email : cs@chandansteel.net

WORKS: Plot No. 15, G. I. D. C., Umbergaon
Dist Valsad, Gujarat - 396 171, INDIA
Tel.: 91-260-256 2066 / 6347 / 1166. Fax.: 91-260-256 2187
E-mail : exports@chandansteel.net

L/c. No. :
L/c. Date:

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA VIALE DE GASPERI, 194 20010 MARCALLO CON CASONE (MILANO) - ITALIA	Test Certificate No. : EXP/22-23/00790- 12 Date of Issue : 30.10.2022 P. O. No. : 00000200 S DTD 24.05.2022 Dt. 26-05-2022 Invoice No. & Date : EXP/22-23/00790 Dt.30.10.2022

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES

Po Sr No.	Part Code	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
29	-	CH-17777	383	46	695.31	ASTM/ASME A/SA182 F316/316L	1-1/2" WNRF 150 LBS 40S	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
"	"	"	"	"	"	"	"	
"	"	"	"	"	"	"	"	
"	"	"	"	"	"	"	"	
"	"	"	"	"	"	"	"	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	N	OTHERS
29	0.020	0.42	1.70	0.038	0.004	16.63	10.08	2.04	-	-	0.090	-
"	"	"	"	"	"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"	"	"	"	"	"

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm² ($R_{p0.2}$)	Tensile Strength N/mm² (R_m)	Elongation %	Reduction of Area %	Hardness (B. H. N.)
29	269	565	52	69	164-166
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

Remarks:
1. The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions Inspection OK.
3. PMI Test 100%:- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Inter-Granular Corrosion Test (ASTM A262 - 17 (Pr.E)):- Satisfactory.
7. The material conforms to ASTM A 182 - 20, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification.
8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
9. Surface roughness quality checked by comparator & found 125 - 250 AARH
10. Visual , Dimension and PMI performed by CSL.
11. Mechanical Testing performed by CSL.

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.

Q. A.

V.Y. NARAYAN
SR. MANAGER Q. A.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

F/QA/18, Rev. 00, 11.01.2018

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2015 CERTIFICATE No. 04 100 051022

ADM. OFFICE: 504, SURJI SAGAR, N. S. PATKAR MARG,
MUMBAI 400 097, INDIA
Tel: 91-22- 66129600. Fax: 91-22-66129633/34
Website : www.chandansteel.net
Email : cs1@chandansteel.net

WORKS: Plot No. 33, G. I. D. C. Umbergaon
Dist Valsad, Gujarat - 396 171, INDIA
Tel: 91-260-256 1066 / 4347 / 1166. Fax: 91-260-256 2187
E-mail : exports@chandansteel.net

L/c. No. :
L/c. Date:

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA VIALE DE GASPERI, 194 20010 MARCALLO CON CASONE (MILANO) - ITALIA	Test Certificate No. : EXP/22-23/01571 -47 Date of Issue : 18.03.2023 P. O. No. : 00000350 Dt. 02-12-2022 Invoice No. & Date : EXP/22-23/01571 Date- 18.03.2023

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES

Po Sr No.	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
21	CH-18812	27	9	17.54	ASTM/ASME A/SA182 F316/316L	1/2" WNRF 300 LBS 40S	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
"	"	"	"	"	"	"	
"	"	"	"	"	"	"	
"	"	"	"	"	"	"	
"	"	"	"	"	"	"	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
21	0.023	0.46	1.86	0.039	0.015	16.98	2.02	10.00	"	"	0.074	"
"	"	"	"	"	"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"	"	"	"	"	"

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm2 (Rp0.2)	Tensile Strength N/mm² (R_m)	Elongation %	Reduction of Area %	Hardness (H. B. W.)
21	253	553	57	75	166-170
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

Remarks:

1. The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions Inspection OK.
3. PMI Test 100%- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Inter-Granular Corrosion Test (ASTM A262 - 17 (Pr.E)):- Satisfactory.
7. The material conforms to ASTM A 182 - 22, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification.
8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
9. Surface roughness quality checked by comparator & found 125 - 250 AARH
10. Visual, Dimension and PMI performed by CSL.
11. Mechanical Testing performed by CSL.

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.

V.Y.NARAYANAN
WORKS INSPECTOR

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 980 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1/2" S.300 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: CH-18812 - Qty:14,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

raccortubi Heat num. or Pos. marking: A-5735 - Qty:18.00
Customer: ROSETTI MARINO S.p.A.
Description: W.N. 3/4" S.300 RF SCH.40/S
Order: 1724000839 - 22.04.24 - Item n.: 990 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000201O
Protocol: CTCERC20240000S072 • CERTIFIED TRUE COPY • Issued 03-06-2024
CTCERT20230000221 9.1.0001

GOODLUCK
ADM. OFFICE: II F-166-167,
Nehru Nagar, Ambedkar Road, Ghaziabad

GOOD LUCK ENGINEERING CO.

Works : Khasra No. 2839, Village : Dhoom Manikpur, G.T. Road, Dadri, G.B. Nagar-203207, U.P. (India)
qc1@goodluckindia.com

ISO 9001 - 2015
CERTIFIED COMPANY
CERTIFICATE NO.-IND.21.6268/QM/U

MATERIAL TEST CERTIFICATE

(AS PER EN - 10204 - 3.1 ☑ / 3.2 ☐)

Entry No. : 5558

CUSTOMER	CUSTOMER P.O. No. & Dt.	OUR W.O. No. & Dt.	SPCN. No.	QAP NO.	DOC. NO.	PROJECT:	TEST CERTIFICATE No & Dt.
RACCORTUBI S.P.A Viale De Gasperi 194 20010 Marcallo con Casone (MI) ITALY	00000295 S 14/10/22	Exp/1391/22-23 18.10.2022					GLECO/J-1391-18 Date 28.01.2023

STEEL MELTING PROCESS	ORDER STATUS	DIMENSIONS AS PER	INSPECTION AGENCY	DATE OF INSPN. & TESTING
EF-AOD		ASME B16.5 (Ed.2020)	M/s RACCORTUBI	27 & 28.01.2023

Item Sr.No.	Item Code	ITEM DESCRIPTION	MATERIAL SPEC.	QUANTITY (NOS)	HEAT NUMBER	BATCH NUMBER	HEAT TREATMENT CONDITION	TEMP °C	SOAKING TIME (Hrs)	COOLING MEDIUM	DELIVERY STATUS
19.000		0.75 in x 300 # x WNRF x SCH 40S (NACE)	ASTM A 182 Gr.F316/316L (Ed.2021)	75	A-5735	GJ2200D	Solution treat & Quenched	1080	04 Hrs	Stirred Water & cooled Below 260°C	Complete

GASKET FACE FINISH:125-250 AARH

Total Qty Pc 75

Report Type	Heat No	Batch No	C%	Mn%	Si%	S%	P%	Cr%	Ni%	Mo%	N%
Ladle	A-5735	-	0.0230	1.4700	0.3700	0.0090	0.0420	16.6400	10.0500	2.0200	0.0790
Product	A-5735	GJ2200D	0.0250	1.5100	0.3800	0.0080	0.0400	16.6800	10.0800	2.0500	0.0790
Required Value	-	Min	-	-	-	-	-	16.0000	10.0000	2.0000	-
		Max	0.0300	2.0000	1.0000	0.0300	0.0450	18.0000	14.0000	3.0000	0.1000

Good Luck Engg. Co. * Dadri (U.P.) * Nikhil Gupta Asst. Manager (Q.C.)

For Raccortubi S.P.A

Authorised Signatory

28/01/23

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

raccortubi Heat num. or Pcs. marking: A-5735 - Qty:18.00
Customer: ROSETTI MARINO S.p.A.
Description: W.N. 3/4" S.300 RF SCH.40/S
Order: 1724000839 - 22.04.24 - Item n.: 990 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000020 10
Protocol: CTCERC2024000 5072 * CERTIFIED TRUE COPY * Issued 03-06-2024
CTCERT20230000221 9.1.0002

GOODLUCK
ADM. OFFICE: II F -166-167,
Nehru Nagar, Ambedkar Road, Ghaziabad

GOOD LUCK ENGINEERING CO.

Works : Khasra No. 2839, Village : Dhoom Manikpur, G.T. Road, Dadri, G.B. Nagar-203207, U.P. (India)
qc1@goodluckindia.com

ISO 9001 - 2015
CERTIFIED COMPANY
CERTIFICATE NO.-IND.21.6268/QM/U

MATERIAL TEST CERTIFICATE

Entry No. : 5558

MECHANICAL TEST REPORT AT ROOM TEMPERATURE IN AS DELIVERED CONDITION	Batch No	Gauge Dia / Size (mm)	Yield Strength (N / mm sq.) (0.2% Proof Stress)	Tensile strength (n/mm Sq.)	Elongation % On GL = 4D	Reduction in Area %	Hardness	Impact Test10X10X55 mm (Charpy 2mm V-Notch)					Grain Size as per ASTM E-112
							BHN	01	02	03	Avg(Joules)	Temp °C	
	GJ2200D	12.49	310.02	583.33	52.00	72.08	168, 170	- - -	- - -	- - -	-	- - -	
	REQUIRED	MIN	205.00	515.00	30.00	50.00	-	-	-	-	-	-	
		MAX	-	-	-	-	-	-	-	-	-	-	

SUPPORTING TESTING	TEST STANDARD	ACCEPTANCE LEVEL	RELEVANT REPORT	SEAL/STAMP OF TPI WITNESS	SEAL / STAMP of Inchange Quality
				ARJUN CHAUDHARY Prepared by:	

Remark:
(1) No Weld repair performed on forging.
(2) Hardness Test carried out on job & found satisfactory.
(3) Material comply all the requirements of PO & Specification.
(4) Material conformed all the requirements of ASTM A961/A961M (Ed. 2021)
(5) No Chinese and East European material is used.
(6) Material 100% visual & dimensional checked & found surface free from all types of defects.
(7) PMI carried out on job (PMI Report No. GLECO/PMI/J-1391/18 DATED 28.01.2023 enclosed) & found satisfactory.
(8) IGC test carried out as per ASTM A262 Practice E Test piece Bend over mandrel Dia = 1t X 180° and reviewed under 20X Mag. Observed "Bend Specimen free of any crack and Grain dropping" Microscopic Structure observed under magnification of 250 X and observed "Step Structure" - Found satisfactory.
(9) Material comply all the requirements of NACE MR0175/ISO 15156 (Ed 2015).
(10) Packing carried out as per PO & Spec.RT_FL_EXEU_2011 and found satisfactory.
(11) Material is free from Mercury & Radioactive Contamination.

Good Luck Engg. Co. * Dadri (U.P.) * Nikhil Gupta Asst. Manager (Q.C.)

We hereby certify that material declared above meets the requirement of P.O./ relevant specification — Identification Mark:

Doc No	Doc Rev No	Date	Effective Date	Doc. Retention Period	Doc. Prepared by	Doc. Approved by	*Recorded document will be prepared, Maintained And preserved by* Inchange Quality
QA 11 TCFP 08	04	13/08/2018	13/08/2018	AS SPECIFIED BY CUSTOMER / COMPANY PROCEDURE	MR	Dir.works	

Document Route
(01) Original copy - Forwarded to CUSTOMER as self certified authentic record from GOOD LUCK ENGG. CO.
(02) 1st Copy - Inchange quality to maintain and preserve the record .

CONTROLLED COPY

for Raccortubi S.p.A
Ramakrishnan 28/01/23

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

VIRAJ PROFILES PRIVATE LIMITED (formerly, Viraj Profiles Limited)(Forgings Div)
Survey No-140/1 & G-75 MIDC, Tarapur Ind.Area, Boisar, Dist.Palghar,Maharashtra-401506,INDIA
Email-vflqc@viraj.com,web,www.viraj.com(A01)

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

(A06)CUSTOMER : M/S. RACCORTUBI SPA VIALE DE GASPERI 194 I-20010 MARCALLO CON CASONE MI Italy	Manufacturer's Symbol (A04)	(A03)MTR NO.	100028548 / 57 REV.1
		INVOICE NUMBER	
		(Z02) DATE	23.12.2023
		MATERIAL SPEC	ASTM A182/A182M-23 / ASME SA182/SA182M-23
		(B02) GRADE	F316/316L
		DIMENSIONAL SPEC	ASME B16.5-2020

(B01) : STAINLESS STEEL FORGED FLANGES | (B04) DELIVERY CONDITION : HOT FORGED & FULLY MACHINED

ISO 9001:2015,TUV NORD REG No-04100031210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE(PED) 2014/68/EU,CERTIFING BODY-TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION No. 0045)

(A07)ORDER NO. 245	(A08) Sales Order No. 100028548 / 560	(A09)Article No: 56

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
6" WNRF S10S 150#	100	DK782

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%N								
MIN						16.00	10.00	2.00									
MAX	0.030	2.00	1.00	0.030	0.045	18.00	14.00	3.00	0.1000								
HEAT	0.019	1.64	0.40	0.021	0.037	16.90	10.05	2.03	0.0480								
PROD.	0.017	1.64	0.40	0.020	0.037	16.90	10.00	2.03	0.0460								

MECHANICAL PROPERTIES

Test Specification ASTM - A370

(C01) Sample location : Mid thickness-forging	(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Specimen Shape - Round		ASTM E10	

Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13) Elongation%	Reduction of Area	(C32) Hardness			(C40) Charpy V-Notch 10x10x55mm (Values in Joules)			
		Rp=0.2%	Rp = 1%						(C42) Single values			(C43)
	N/mm2	N/mm2	N/mm2	Lo=4D	%	BHN-1	BHN-2	AVG	1	2	3	AVG
Req.	515 MIN	205 MIN		30 MIN	50 MIN							
T	562.35	270.75	311.33	59.60	69.13	152	154	153	206	224	198	209

Other applicable Specifications :: NACE MR 0175 / ISO 15156-2015 & NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10

Melting Process : Induction furnace/Aragon Oxygen Decarburisation (AOD-IRS), Concast

Heat Treatment	Solution Annealed at 1080°C and water Quenched
Dimension	: Conform with the specification (100% inspected)
Surface quality	: Satisfactory Roughness Value - RA 3.2 TO 6.3 µm / 125 TO 250 AARH
PMI Test	No objection (100% tested with mobile spectro)
Inter Granular Corrosion Test	: Passed IGC test in accordance with ASTM A262 practice E
Radioactivity Test	All the above material is tested for Radioactivity and found with in the limit of background radiation.
Liquid penetrant test	: No objection(test method-ASTM E 165 & accepted as per ASME Sec.VIII division 1-appendix 8)

HS Code: 73072100 The material is manufactured /melted in Viraj Profiles Private Limited Steel Mill and is of Indian Origin Material does not contain steel products originating in Russia mentioned The Russia (Sanctions (EU Exit) (Amendment) Regulations 2023 Regulation 461A and 461B and Annex XVII to the (EU) Regulation No 833/ 2014 and further amendment.

ROSETTI MARINO
Supply Management Dept.
☑ Witness ☒ Review

VIRAJ PROFILES PVT. LTD. VIRAJ QUALITY ASSURANCE

VIJAY KUMAR PILLAI (PRESIDENT)

CTCER[redacted]1.0001

VIRAJ PROFILES PRIVATE LIMITED (formerly, Viraj Profiles Limited)(Forgings Div)
Survey No-140/1 & G-75 MIDC, Tarapur Ind.Area, Boisar, Dist.Palghar,Maharashtra-401506,INDIA
Email-vflqc@viraj.com,web.www.viraj.com(A01)

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

	Manufacturer's Symbol (A04)	(A03)MTR NO.	12/230026936/54 / Rev - 00
		INVOICE NUMBER	910024465
		(Z02) DATE	05.08.2023
		MATERIAL SPEC.	ASTM A182/A182M-23/ASME SA182/SA182M-21
			EN10222-5-2017/ASME SECT.II PART A-2021
		(B02) GRADE	F316/316L/1.4401/1.4404
		DIMENSIONAL SPEC.	ASME B16.5-2020/EN1759-1-2005

(B01) : **STAINLESS STEEL FORGED FLANGES** | (B04) **DELIVERY CONDITION :**

ISO 9001:2015-TUV NORD REG No-04100031210 05 EXPIRY DATE: 21.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PED (2014/68/EU) BY CERTIFICATION BODY FOR PRESSURE EQUIPMENT OF TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION NO. 0045)

(A07)ORDER NO: PUR-IOX04045RH	(A08)Sales Order No. 100024860/000320	(A09)Article No:125

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
1" WNRF 300# S40S	600	DG136

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Ti	%N
MIN						16.50	10.00	2.00		
MAX	0.030	2.00	1.00	0.030	0.045	18.50	12.00	2.50		0.1000
HEAT	0.024	1.62	0.38	0.025	0.035	16.75	10.09	2.03	0.002	0.0660

MECHANICAL PROPERTIES

(C01) Sample location : Mid thickness-forging	(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Sample Shape Round		ASTM E10	

Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13)	Reduction of Area	(C32) Hardness	(C40) Charpy V-Notch 10x10x55mm Values At +20°C (Joules)			
		Rp=0.2%	Rp = 1%	Elongation%			(C42) Single values			(C43)
	MPA	MPA	MPA	Lo=4D	%	BHN	1	2	3	AVG
Req.	515/690	205 MIN	225 MIN	35 MIN	50 MIN	237 MAX				
T	546.88	282.81	325.65	59.40	70.40	151	195	209	214	206

Other applicable Specifications :: NACE MR 0175-2021 / ISO 15156 - 2020 NACE MR 0103 - 2015 & MATERIAL CONFORMS TO W2/W9/W10 / NORSOK MDS S01 Rev.5-2021

Melting Process : Electrical induction furnace & Argon Oxygen decarburization(IRS) Concast

Heat Treatment	: Solution Annealed at 1080°C and water Quenched
Dimensional Inspection	: Conform with the specification (100% inspected)
Surface quality	: Satisfactory Roughness value - RZ 12.5 to 25 µm / RA 3.2 to 6.3 µm
PMI Test	: No objection (100% tested with mobile spectro)
Corrosion Test	: Passed IGC test in accordance with DIN EN ISO 3651-2 & ASTM A262 Practice E
Micro Observation	: No carbide precipitation observed on grain boundaries
Radioactivity Test	: We here by certify that all the material is free from radioactive contamination
Mercury Contamination	: Free from mercury contamination

We certify that the above material has been inspected and tested and complies with the order/contract and is of Indian origin

VF 1

(Z03)Inspector's Stamp

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

VIJAY KUMAR PILLAI (GM, QAD)

VIRAJ PROFILES LTD. QUALITY ASSURANCE

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1010 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1" S.300 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: DG136 - Qty:30,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CTCER[redacted]0001

VIRAJ PROFILES PRIVATE LIMITED (formerly, Viraj Profiles Limited)(Forgings Div)
Survey No-140/1 & G-75 MIDC, Tarapur Ind.Area, Boisar, Dist.Palghar,Maharashtra-401506,INDIA
Email-vflqc@viraj.com,web.www.viraj.com(A01)

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

	Manufacturer's Symbol (A04)	(A03)MTR NO.	12/230039622/57 / Rev - 00
		INVOICE NUMBER	910028963
		(Z02) DATE	26.11.2023
		MATERIAL SPEC.	ASTM A182/A182M-23/ASME SA182/SA182M-23
			EN10222-5-2017/ASME SECT.II PART A-2023
		(B02) GRADE	F316/316L/1.4401/1.4404
		DIMENSIONAL SPEC.	ASME B16.5-2020/EN1759-1-2005

(B01) : STAINLESS STAINLESS STEEL FORGED | (B04) DELIVERY CONDITION : HOT FORGED AND FULLY MACHINED

ISO 9001:2015-TUV NORD REG No-0110001210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PED (2014/68/EU) BY CERTIFICATIONBODY FOR PRESSURE EQUIPMENT OF TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION NO. -0045)

(A07)ORDER NO: PUR-IOX06888RH	(A08)Sales Order No. 100029354/001020	(A09)Article No:102

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
1" WNRF 300# S40S	70	DJ346

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Ti	%N
MIN						16.50	10.00	2.00		
MAX	0.030	2.00	1.00	0.030	0.045	18.50	12.00	2.50		0.1000
HEAT	0.017	1.56	0.43	0.011	0.036	17.05	10.09	2.03	0.002	0.0600

MECHANICAL PROPERTIES

(C01) Sample location : Mid thickness-forging	(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Sample Shape Round		ASTM E10	

Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13)	Reduction of Area	(C32) Hardness	(C40) Charpy V-Notch 10x10x55mm Values At +20°C (Joules)			
		Rp=0.2%	Rp = 1%	Elongation%			(C42) Single values			(C43)
	MPA	MPA	MPA	Lo=4D	%	BHN	1	2	3	AVG
Req.	515/690	205 MIN	225 MIN	35 MIN	50 MIN	237 MAX				
T	573.74	307.64	350.95	60.00	71.72	156	216	208	190	205

Other applicable Specifications :: NACE MR 0175-2021/ISO 15156-2020 NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10 / NORSOK MDS S01 Rev.5-2021

Melting Process : Electrical induction furnace & Argon Oxygen decarburization(IRS) Concast

Heat Treatment	: Solution Annealed at 1080°C and water Quenched
Dimensional Inspection	: Conform with the specification (100% inspected)
Surface quality	: Satisfactory Roughness value - RZ 12.5 to 25 µm / RA 3.2 to 6.3 µm
PMI Test	: No objection (100% tested with mobile spectro)
Corrosion Test	: Passed IGC test in accordance with DIN EN ISO 3651-2 & ASTM A262 Practice E
Micro Observation	: No carbide precipitation observed on grain boundaries
Radioactivity Test	: We here by certify that all the material is free from radioactive contamination
Mercury Contamination	: Free from mercury contamination

HS Code: 73072100 The material is manufactured /melted in Viraj Profiles Private Limited Steel Mill and is of Indian Origin. Material does not contain steel products originating in Russia mentioned The Russia (Sanctions (EU Exit) (Amendment) Regulations 2023 Regulation 46IA and 46IB and Annex XVII to the (EU) Regulation No 833/ 2014 and further amendment.

VF 1

(Z03)Inspector's Stamp

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

VIJAY KUMAR PILLAI (GM, QAD)

VIRAJ PROFILES LTD. QUALITY ASSURANCE

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1010 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1" S.300 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: DJ346 - Qty:53,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY * Issued 03-06-2024

CTCERT202400003761.1.0001

VIRAJ PROFILES PRIVATE LIMITED (formerly, Viraj Profiles Limited)(Forgings Div)
Survey No-140/1 & G-75 MIDC, Tarapur Ind.Area, Boisar, Dist.Palghar,Maharashtra-401506,INDIA
Email-vflqc@viraj.com,web.www.viraj.com(A01)

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

	Manufacturer's Symbol (A04)	(A03)MTR NO.	12/230044598/27 / Rev - 00
		INVOICE NUMBER	910030406
		(Z02) DATE	31.12.2023
		MATERIAL SPEC.	ASTM A182/A182M-23/ASME SA182/SA182M-23
			EN10222-5-2017/ASME SECT.II PART A-2023
		(B02) GRADE	F316/316L/1.4401/1.4404
		DIMENSIONAL SPEC.	ASME B16.5-2020/EN1759-1-2005

(B01) : STAINLESS STEEL FORGED FLANGES | (B04) DELIVERY CONDITION : HOT FORGED AND FULLY MACHINED

ISO 9001:2015-TUV NORD REG No-04100031210-05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PED (2014/68/EU) BY CERTIFICATION BODY FOR PRESSURE EQUIPMENT OF TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION NO. -0045)

(A07)ORDER NO: PUR-IOX07383RH	(A08)Sales Order No. 100029987/000950	(A09)Article No:95

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
1" WNRF 300# 840S	108	DL364

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Ti	%N
MIN						16.50	10.00	2.00		
MAX	0.030	2.00	1.00	0.030	0.045	18.50	12.00	2.50		0.1000
HEAT	0.022	1.61	0.35	0.026	0.040	17.10	10.07	2.04	0.001	0.0640

MECHANICAL PROPERTIES

(C01) Sample location : Mid thickness-forging	(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Sample Shape Round		ASTM E10	

Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13)	Reduction of Area	(C32) Hardness	(C40) Charpy V-Notch 10x10x55mm Values At +20°C (Joules)			
		Rp=0.2%	Rp = 1%	Elongation%			(C42) Single values			(C43)
	MPA	MPA	MPA	Lo=4D	%	BHN	1	2	3	AVG
Req.	515/690	205 MIN	225 MIN	35 MIN	50 MIN	237 MAX				
T	560.44	263.53	301.34	59.00	70.40	154	166	172	188	175

Other applicable Specifications : NACE MR 0175-2021/ISO 15156-2020 NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10 / NORSOK MDS S01 Rev.5-2021

Melting Process : Electrical induction furnace & Argon Oxygen decarburization(IRS) Concast

Heat Treatment	: Solution Annealed at 1080°C and water Quenched
Dimensional Inspection	: Conform with the specification (100% inspected)
Surface quality	: Satisfactory Roughness value - RZ 12.5 to 25 µm / RA 3.2 to 6.3 µm
PMI Test	: No objection (100% tested with mobile spectro)
Corrosion Test	: Passed IGC test in accordance with DIN EN ISO 3651-2 & ASTM A262 Practice E
Micro Observation	: No carbide precipitation observed on grain boundaries
Radioactivity Test	: We here by certify that all the material is free from radioactive contamination
Mercury Contamination	: Free from mercury contamination

HS Code: 73072100 The material is manufactured /melted in Viraj Profiles Private Limited Steel Mill and is of Indian Origin. Material does not contain steel products originating in Russia mentioned The Russia (Sanctions (EU Exit) (Amendment) Regulations 2023 Regulation 46IA and 46IB and Annex XVII to the (EU) Regulation No 833/ 2014 and further amendment.

VF 1

(Z03)Inspector's Stamp

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

VIJAY KUMAR PILLAI (GM, QAD)

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1010 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1" S.300 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: DL364 - Qty:97,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2015 CERTIFICATE No. 04 100 011022

ADM. OFFICE: 504, SUKH SAGAR, N. S. PATKAR MARG,
MUMBAI 400 007, INDIA
Tel.: 91-22- 66290600. Fax.: 91-22-66290633/34
Website : www.chandansteel.net
Email : csl@chandansteel.net

WORKS: Plot No. 35, G. I. D. C., Umbergaon
Dist Valsad, Gujarat - 396 171,INDIA
Tel.: 91-260-256 2066 / 4367 / 1166, Fax.: 91-260-256 2287
E-mail : exports@chandansteel.net

L/c. No. :
L/c. Date:

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA
VIALE DE GASPERI, 194
20010 MARCALLO CON CASONE
(MILANO) - ITALIA

Test Certificate No. : EXP/22-23/0000- 17
Date of Issue : 20.10.2022/Rev.01 Dt. 22.10.2022
P. O. No. : 00000200 S DTD 24.05.2022 Dt. 26-05-2022
Invoice No. & Date : EXP/22-23/0000 Dt.20.10.2022

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES

Po Sr No.	Part Code	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
38	-	CH-16463	96	51	668.00	ASTM/ASME A/SA182 F316/316L	3" WNRF 300 LBS 10S	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
38	0.020	0.42	1.69	0.038	0.022	16.65	10.02	2.02	-	-	0.069	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm² ($R_{p0.2}$)	Tensile Strength N/mm² (R_m)	Elongation %	Reduction of Area %	Hardness (H. B. W.)
38	260	565	59	74	162-164
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Remarks:
1.The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions Inspection OK.
3. PMI Test 100%:- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Inter-Granular Corrosion Test (ASTM A262 - 17 (Pr.E)):- Satisfactory.
7. The material conforms to ASTM A 182 - 20, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification.
8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
9. Surface roughness quality checked by comparator & found 125 - 250 AARH
10. Visual , Dimension and PMI performed by CSL.
11. Mechanical Testing perfomed by CSL.

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.

Q. A.

V.Y. NARAYAN
SR. MANAGER Q. A.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Customer: ROSETTI MARINO S.p.A.
Order: 1724000839 - 22.04.24 - Item n.: 1020 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 3" S.300 RF SCH.10/S

raccortubi Heat num. or Pcs. marking: CH-16463 - Qty:1,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2015 CERTIFICATE No. 04 100 011022

ADM. OFFICE: 504, SUKH SAGAR, N. S. PATKAR MARG,
MUMBAI 400 007, INDIA
Tel.: 91-22-66290600, Fax.: 91-22-66290633/34
Website : www.chandansteel.net
Email : cel@chandansteel.net

WORKS: Plot No. 35, G. I. D. C., Umbergaon
Dist Valsad, Gujarat - 396 171, INDIA
Tel.: 91-260-256 2066 / 4367 / 1166, Fax.: 91-260-256 2287
E-mail : exports@chandansteel.net

L/c. No. :
L/c. Date:

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA
VIALE DE GASPERI, 194
20010 MARCALLO CON CASONE
(MILANO) - ITALIA

Test Certificate No.	: EXP/21-22/01811-56
Date of Issue	: 30.03.2022
P. O. No.	: 00000041 S Dtd.07.02.2022
Invoice No. & Date	: EXP/21-22/01811 Dt.30.03.2022

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES

Po Sr No.	Part Code	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
85	G6LWN6S300RPS40SE	CH-16164	25	31	515.00	ASTM/ASME A/SA 182 F316/316L	6" WNRF 300 LBS 40S	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
85	0.022	0.38	1.73	0.043	0.012	17.03	2.06	10.04	-	-	0.084	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm² ($R_{p0.2}$)	Tensile Strength N/mm² (R_m)	Elongation %	Reduction of Area %	Hardness (H. B. W.)
85	276	573	56	72	165-168
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Remarks:
1. The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions Inspection OK.
3. PMI Test 100%:- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Inter-Granular Corrosion Test (ASTM A262 - 17 (Pr.E)):- Satisfactory.
7. The material conforms to ASTM A 182 - 20, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification.
8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
9. Surface roughness quality checked by comparator & found 125 - 250 AARH
10. Visual, Dimension and PMI performed by CSL and 5% witnessed by TPI
11. Mechanical Testing performed by CSL and Reviewed By TPI

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.

Q.A.

V.Y. NARAYAN
SR. MANAGER Q. A.

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

F/QA/18, Rev. 00, 11.01.2018

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1030 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 6" S.300 RF SCH.40/S

raccortubi Heat num. or Pos. marking: CH-16164 - Qty:6,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

VIRAJ PROFILES PRIVATE LIMITED (formerly, Viraj Profiles Limited)(Forgings Div)
Survey No-140/1 & G-75 MIDC, Tarapur Ind.Area, Boisar, Dist.Palghar,Maharashtra-401506,INDIA
Email-vflqc@viraj.com,web.www.viraj.com(A01)

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

Manufacturer's Symbol (A04)	(A03)MTR NO.	12/230025685/18 / Rev - 00
	INVOICE NUMBER	910024113
	(Z02) DATE	29.07.2023
	MATERIAL SPEC.	ASTM A182/A182M-23/ASME SA182/SA182M-21
		EN10222-5-2017/ASME SECT.II PART A-2021
	(B02) GRADE	F316/316L/1.4401/1.4404
	DIMENSIONAL SPEC.	ASME B16.5-2020

(B01) : STAINLESS STEEL FORGED FLANGES | (B04) DELIVERY CONDITION :

ISO 9001:2015-TUV NORD REG.No-04100031210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PED (2014/68/EU) BY CERTIFICATION BODY FOR PRESSURE EQUIPMENT OF TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION NO. -0045)

(A07)ORDER NO: 4500035311 | (A08)Sales Order No. 100023231/000350 | (A09)Article No:158846

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
4" WNRF 300# S10S	57	DG350

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Ti	%N
MIN						16.50	10.00	2.00		
MAX	0.030	2.00	1.00	0.030	0.045	18.50	12.00	2.50		0.1000
HEAT	0.018	1.60	0.53	0.020	0.038	16.64	10.08	2.03	0.001	0.0670

MECHANICAL PROPERTIES

(C01) Sample location : Mid thickness-forging	(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Sample Shape Round		ASTM E10				
Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13)	Reduction of Area	(C32) Hardness	(C40) Charpy V-Notch 10x10x55mm Values At +20°C (Joules)		
		Rp=0.2%	Rp = 1%	Elongation%			(C42) Single values		(C43)
	MPA	MPA	MPA	Lo=5D	%	BHN	1	2	3	AVG
Req.	515/690	205 MIN	225 MIN	35 MIN	50 MIN	237 MAX				
T	553.75	271.00	317.51	59.60	72.52	152	214	226	206	215

Other applicable Specifications :: NACE MR 0175-2021/ISO 15156-2020 NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10

Melting Process : Electrical induction furnace & Argon Oxygen decarburization(IRS) Concast

Heat Treatment	: Solution Annealed at 1080°C and water Quenched
Dimensional Inspection	: Conform with the specification (100% inspected)
Surface Quality	: Satisfactory Roughness value - RZ 12.5 to 25 µm / RA 3,2 to 6.3 µm
PMI Test	: No objection (100% tested with mobile spectro)
Corrosion Test	: Passed IGC test in accordance with DIN EN ISO 3651-2 & ASTM A262 Practice E
Micro Observation	: No carbide precipitation observed on grain boundaries
Radioactivity Test	: We here by certify that all the material is free from radioactive contamination
Mercury Contamination	: Free from mercury contamination

The material is manufactured /melted in Viraj Profiles Private Limited Steel Mill and is of Indian Origin.
Material does not contain steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No 833/ 2014 and further amendment. :

We certify that the above material has been inspected and tested and complies with the order/contract and is of Indian origin

VF 1

(Z03)Inspector's Stamp

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

VIJAY KUMAR PILLAI (GM, QAD)

VIRAJ PROFILES LTD. QUALITY ASSURANCE

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1040 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 4" S.300 RF SCH.10/S

raccortubi Heat num. or Pcs. marking: DG350 - Qty:20,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03.06.2024

CTCERT202400003759.1.0001

VIRAJ PROFILES PRIVATE LIMITED (formerly, Viraj Profiles Limited)(Forgings Div)
Survey No-140/1 & G-75 MIDC, Tarapur Ind.Area, Boisar, Dist.Palghar,Maharashtra-401506,INDIA
Email-vflqc@viraj.com,web.www.viraj.com(A01)

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

(A06)CUSTOMER :	Manufacturer's Symbol (A04)	(A03)MTR NO.	12/230041537/26 / Rev - 00
		INVOICE NUMBER	910029390
		(Z02) DATE	05.12.2023
		MATERIAL SPEC.	ASTM A182/A182M-23/ASME SA182/SA182M-23
			EN10222-5-2017/ASME SECT.II PART A-2023
		(B02) GRADE	F316/316L/1.4401/1.4404
		DIMENSIONAL SPEC.	ASME B16.5-2020/EN1759-1-2005

(B01) : STAINLESS STEEL FORGED FLANGES | (B04) DELIVERY CONDITION : HOT FORGED AND FULLY MACHINED

ISO 9001:2015-TUV NORD REG.No-04100031210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PED (2014/68/EU) BY CERTIFICATION BODY FOR PRESSURE EQUIPMENT OF TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION NO. -0045)

(A07)ORDER NO: PUR-IOX06129RH-AA	(A08)Sales Order No. 100028433/000720	(A09)Article No:102

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
4" WNRF 300# S10S	26	DK476

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Ti	%N
MIN						16.50	10.00	2.00		
MAX	0.030	2.00	1.00	0.030	0.045	18.50	12.00	2.50		0.1000
HEAT	0.017	1.62	0.40	0.024	0.036	17.02	10.01	2.03	0.006	0.0760

MECHANICAL PROPERTIES

(C01) Sample location : Mid thickness-forging	(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Sample Shape Round		ASTM E10	

Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13)	Reduction of Area	(C32) Hardness	(C40) Charpy V-Notch 10x10x55mm Values At +20°C (Joules)			
		Rp=0.2%	Rp = 1%	Elongation%			(C42) Single values			(C43)
	MPA	MPA	MPA	Lo=4D	%	BHN	1	2	3	AVG
Req.	515/690	205 MIN	225 MIN	35 MIN	50 MIN	237 MAX				
T	586,33	288,79	334,58	68,00	68,64	158	192	190	176	186

Other applicable Specifications :: NACE MR 0175-2021/ISO 15156-2020 NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10 / NORSOK MDS S01 Rev.5-2021

Melting Process : Electrical induction furnace & Argon Oxygen decarburization(IRS) Concast

Heat Treatment	: Solution Annealed at 1080°C and water Quenched
Dimensional Inspection	: Conform with the specification (100% inspected)
Surface quality	: Satisfactory Roughness value - RZ 12.5 to 25 µm / RA 3.2 to 6.3 µm
PMI Test	: No objection (100% tested with mobile spectro)
Corrosion Test	: Passed IGC test in accordance with DIN EN ISO 3651-2 & ASTM A262 Practice E
Micro Observation	: No carbide precipitation observed on grain boundaries
Radioactivity Test	: We here by certify that all the material is free from radioactive contamination
Mercury Contamination	: Free from mercury contamination

HS Code: 73072100 The material is manufactured /melted in Viraj Profiles Private Limited Steel Mill and is of Indian Origin. Material does not contain steel products originating in Russia mentioned The Russia (Sanctions (EU Exit) (Amendment) Regulations 2023 Regulation 46IA and 46IB and Annex XVII to the (EU) Regulation No 833/ 2014 and further amendment.

VF 1

(Z03)Inspector's Stamp

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

VIJAY KUMAR PILLAI (GM, QAD)

VIRAJ PROFILES LTD. VIRAJ QUALITY ASSURANCE

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1040 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 4" S.300 RF SCH.10/S

raccortubi Heat num. or Pcs. marking: DK476 - Qty:22,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CTCERT202400003758.1.0001

VIRAJ PROFILES PRIVATE LIMITED (formerly, Viraj Profiles Limited)(Forgings Div)
Survey No-140/1 & G-75 MIDC, Tarapur Ind.Area, Boisar, Dist.Palghar,Maharashtra-401506,INDIA
Email-vflqc@viraj.com,web.www.viraj.com(A01)

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

Manufacturer's Symbol (A04)	(A03)MTR NO.	12/230041151/21 / Rev - 00
	INVOICE NUMBER	910029252
	(Z02) DATE	01.12.2023
	MATERIAL SPEC.	ASTM A182/A182M-23/ASME SA182/SA182M-23
		EN10222-5-2017/ASME SECT.II PART A-2023
	(B02) GRADE	F316/316L/1.4401/1.4404
	DIMENSIONAL SPEC.	ASME B16.5-2020/EN1759-1-2005

(B01) : STAINLESS STAINLESS STEEL FORGED | (B04) DELIVERY CONDITION : HOT FORGED AND FULLY MACHINED

ISO 9001:2015-TUV NORD REG.No-04100031210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PED (2014/68/EU) BY CERTIFICATION BODY FOR PRESSURE EQUIPMENT OF TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION NO. -0045)

(A07)ORDER NO: PUR-IOX06334RH | (A08)Sales Order No. 100028708/001530 | (A09)Article No:178

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
4" WNRF 300# S10S	26	DK476

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Ti	%N
MIN						16.50	10.00	2.00		
MAX	0.030	2.00	1.00	0.030	0.045	18.50	12.00	2.50		0.1000
HEAT	0.017	1.62	0.40	0.024	0.036	17.02	10.01	2.03	0.006	0.0760

MECHANICAL PROPERTIES

(C01) Sample location : Mid thickness-forging	(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Sample Shape Round		ASTM E10	

Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13)	Reduction of Area	(C32) Hardness	(C40) Charpy V-Notch 10x10x55mm Values At +20°C (Joules)			
		Rp=0.2%	Rp = 1%	Elongation%			(C42) Single values			(C43)
	MPA	MPA	MPA	Lo=4D	%	BHN	1	2	3	AVG
Req.	515/690	205 MIN	225 MIN	35 MIN	50 MIN	237 MAX				
T	586.33	288.79	334.58	68.00	68.64	158	192	190	176	186

Other applicable Specifications :: NACE MR 0175-2021/ISO 15156-2020 NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10 / NORSOK MDS S01 Rev.5-2021

Melting Process : Electrical induction furnace & Argon Oxygen decarburization(IRS) Concast

Heat Treatment	: Solution Annealed at 1080°C and water Quenched
Dimensional Inspection	: Conform with the specification (100% inspected)
Surface quality	: Satisfactory Roughness value - RZ 12.5 to 25 µm / RA 3.2 to 6.3 µm
PMI Test	: No objection (100% tested with mobile spectro)
Corrosion Test	: Passed IGC test in accordance with DIN EN ISO 3651-2 & ASTM A262 Practice E
Micro Observation	: No carbide precipitation observed on grain boundaries
Radioactivity Test	: We here by certify that all the material is free from radioactive contamination
Mercury Contamination	: Free from mercury contamination

HS Code: 73072100 The material is manufactured /melted in Viraj Profiles Private Limited Steel Mill and is of Indian Origin. Material does not contain steel products originating in Russia mentioned The Russia (Sanctions (EU Exit) (Amendment) Regulations 2023 Regulation 46IA and 46IB and Annex XVII to the (EU) Regulation No 833/2014 and further amendment.

VF 1

(Z03)Inspector's Stamp

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

VIJAY KUMAR PILLAI (GM, QAD)

VIRAJ PROFILES LTD. VIRAJ QUALITY ASSURANCE

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1040 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 4" S.300 RF SCH.10/S

raccortubi Heat num. or Pos. marking: DK476 - Qty:26,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CTCERT202400003757.1.0001

VIRAJ PROFILES PRIVATE LIMITED (formerly, Viraj Profiles Limited)(Forgings Div)
Survey No-140/1 & G-75 MIDC, Tarapur Ind.Area, Boisar, Dist.Palghar,Maharashtra-401506,INDIA
Email-vflqc@viraj.com,web.www.viraj.com(A01)

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

Manufacturer's Symbol (A04)	(A03)MTR NO.	12/240000620/40 / Rev - 01
	INVOICE NUMBER	910030727
	(Z02) DATE	14.01.2024
	MATERIAL SPEC.	ASTM A182/A182M-23/ASME SA182/SA182M-23
		EN10222-5-2017/ASME SECT.II PART A-2023
	(B02) GRADE	F316/316L/1.4401/1.4404
	DIMENSIONAL SPEC.	ASME B16.5-2020/EN1759-1-2005

(B01) : STAINLESS STAINLESS STEEL FORGED | (B04) DELIVERY CONDITION : HOT FORGED AND FULLY MACHINED

ISO 9001:2015-TUV NORD REG.No-04100031210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PED (2014/68/EU) BY CERTIFICATION BODY FOR PRESSURE EQUIPMENT OF TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION NO. -0045)

(A07)ORDER NO: PUR-IOX06888RH	(A08)Sales Order No. 100029354/001070	(A09)Article No:107

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
4" WNRF 300# S10S	78	EA085

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Ti	%N
MIN						16.50	10.00	2.00		
MAX	0.030	2.00	1.00	0.030	0.045	18.50	12.00	2.50		0.1000
HEAT	0.024	1.64	0.35	0.025	0.036	16.95	10.02	2.02	0.007	0.0740

MECHANICAL PROPERTIES

(C01) Sample location : Mid thickness-forging	(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Sample Shape Round		ASTM E10	

Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13)	Reduction of Area	(C32) Hardness	(C40) Charpy V-Notch 10x10x55mm Values At +20°C (Joules)			
		Rp=0.2%	Rp = 1%	Elongation%			(C42) Single values			(C43)
	MPA	MPA	MPA	Lo=4D	%	BHN	1	2	3	AVG
Req.	515/690	205 MIN	225 MIN	35 MIN	50 MIN	237 MAX				
T	552.57	250.57	291.64	56.40	70.80	152	199	192	220	204

Other applicable Specifications :: NACE MR 0175-2021/ISO 15156-2020 NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10 / NORSOK MDS S01 Rev.5-2021

Melting Process : Electrical induction furnace & Argon Oxygen decarburization(IRS) Concast

Heat Treatment	: Solution Annealed at 1080°C and water Quenched
Dimensional Inspection	: Conform with the specification (100% inspected)
Surface quality	: Satisfactory Roughness value - RZ 12.5 to 25 µm / RA 3.2 to 6.3 µm
PMI Test	: No objection (100% tested with mobile spectro)
Corrosion Test	: Passed IGC test in accordance with DIN EN ISO 3651-2 & ASTM A262 Practice E
Micro Observation	: No carbide precipitation observed on grain boundaries
Radioactivity Test	: We here by certify that all the material is free from radioactive contamination
Mercury Contamination	: Free from mercury contamination

HS Code: 73072100 The material is manufactured /melted in Viraj Profiles Private Limited Steel Mill and is of Indian Origin. Material does not contain steel products originating in Russia mentioned The Russia (Sanctions (EU Exit) (Amendment) Regulations 2023 Regulation 46IA and 46IB and Annex XVII to the (EU) Regulation No 833/ 2014 and further amendment.

VF 1

(Z03)Inspector's Stamp

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☐ Review

VIJAY KUMAR PILLAI (GM, QAD)

VIRAJ PROFILES LTD. QUALITY ASSURANCE

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1040 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 4" S.300 RF SCH.10/S

raccortubi Heat num. or Pos. marking: EA085 - Qty:2,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001:2015 CERTIFICATE No. IN 013151

ADM. OFFICE: 501, SUKH SAGAR, N. S. PATKAR MARG,
MUMBAI 400 007, INDIA
Tel: 91-22- 66196600, Fax: 91-22-66196633/34
Website : www.chandansteel.net
Email : sal@chandansteel.net
L/c. No. :
L/c. Date:

WORKS: Plot No. 35, Survery No.102/2 & 3 G. I. D. C.,
Village : Dehari, Tal- Umbergaon.
Dist Valsad, Gujarat - 396 171. INDIA.
Tel.: 91-260-256 2066 / 4367 / 1166. Fax: 91-260-256 2287
E-mail : exports@chandansteel.net

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA VIALE DE GASPERI, 191 20010 MARCALLO CON CASONE (MILANO) - ITALIA	Test Certificate No. : 1673F/23-24- 21 Date of Issue : P. O. No. : 00000058 Dt. 06.04.2023 Invoice No. & Date : 1673F/23-24

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES

Po Sr No.	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
21	CH-18895	164	8	519.388	ASTM/ASME A/SA182 F316/316L	1-1/2" WNRF 300 LBS 40S	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
21	0.022	0.43	1.66	0.036	0.028	16.82	2.01	10.08	-	-	0.072	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm2 (Rp0.2)	Tensile Strength N/mm² (Rm)	Elongation %	Reduction of Area %	Hardness (H. B. W.)
21	268	563	58	72	162-166
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Remarks:
1. The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions inspection OK.
3. PMI Test 100%:- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Inter-Granular Corrosion Test (ASTM A262 - 17 (Pr.E)):- Satisfactory.
7. The material conforms to ASTM A 182 - 22, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification.
8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
9. Surface roughness quality checked by comparator & found 125 - 250 AARH
10. Visual , Dimension and PMI performed by CSL.
11. Mechanical Testing perfomed by CSL.

Q.A.

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.

V.Y.NARAYANAN
WORKS INSPECTOR

F/QA/18, Rev. 00, 11.01.2018

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1050 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1.1/2" S.300 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: CH-18895 - Qty:16,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CTCERT202300004221.1.0001

Flanschenwerk Bebitz

Flanschenwerk Bebitz GmbH • Lebendorfer Str. 1 • 06420 Könnern OT Bebitz • GERMANY
(A01)

Abnahmeprüfzeugnis 3.1 / Inspection certificate 3.1 / Certificat de reception 3.1

nach (A02) / acc. DIN EN 10204 : 2005 Nr. (A03) / No. 23-04271 **Datum (Z02) / Date** 18.10.2023

Zeichen des Herstellers (A04) / Manufacturer's brand: [B]

Stempel des Abnehmers (Z03) / Stamp of the testing engineer: TKO 7

Überprüft als Hersteller nach AD-Merkblatt W0 / TRD100 und VdTÜV Werkstoffblätter 350/3, 354, 399 / Approved as manufacturer according AD-Merkblatt W0 / TRD100 and VdTÜV Material Sheets 350/3, 354, 399
Zertifiziert nach DGR 2014/68/EU durch TÜV NORD Systems GmbH Co. KG, notifizierte Stelle 0045 / Certified according to PED 2014/68/EU, certifying body TÜV NORD GmbH Co. KG, notified body no. 0045

Besteller (A06) Customer RACCORTUBI S. p. A.
Viale De Gasperi 194
20010 MARCALLO CON CASONE - MILANO

Bestell-Nr (A07) / Order-No. 00000117
Auftrag (A08) / Order 20002536
Lieferschein / Delivery No. 30009853
Position (B07.1) / Item 37B

Stck (B08) Quantity	Bezeichnung (B01; B09 - B11) Product	Schmelze/Prüflos (B07) Heat no./Test no.
18	10 inch Welding Neck Flange 150 lbs S10s raised face	DF309/1

Material (B02; B05) F 316/F 316L ASTM A182M-21 / ASME SA-182M
solution annealed > 1040 °C and quenched in water

Anford. (B03) Requirements ASME B16.5-2017
NACE MR0175-2015 / MR0103-2015 - DIN EN ISO 15156-3:2015 / DIN EN ISO 17945:2015
2021 ASME Boiler & Pressure Vessel Code - Section II Part A

PMI-tested 100%, IC-test acc. to DIN EN ISO 3651-2 Test A / ASTM A262 practice E

Schmelzenanalyse (C71 - C92) / Ladle analysis **Erschmelzung (C70) / Melting process** E

C	Si	Mn	P	S	Cr	Ni	Ti	Mo	Nb	V	N	Cu	Al	PREN
0,013	0,32	1,66	0,037	0,022	16,80	10,10	0,001	2,04			0,070	0,45		24,65

$CEV = C + \frac{Mn}{6} + \frac{V + Mo + Cr}{5} + \frac{Ni + Cu}{15}$ $PREN = Cr + 3{,}3 \times Mo + 16 \times N$

Mechanische Prüfungen / Mechanical tests

Probenlage (C02): T / Position of Specimen: T Zugversuch / Tensile Test - ASTM A 370						KBV / Impact test DIN EN ISO 148-1 ASTM A370 (V-Kerb / V-notch)			Härte (C32) Hardness ISO 6506-1
Temp (C03) ° C	Streckgrenze (C11) / Yield 0,2% MPa (N/mm²)	1,0% MPa (N/mm²)	Zugfestigkeit (C12) Tensile MPa (N/mm²)	Dehnung (C13) Elongation %	Einschnürg. Red. of area %	Temp. (C03) ° C	Einzelwerte (C42) Single values J	MW (C43) Average J	HBW 2,5/187,5
20	min 205 max		515	30,0 $5d_0$ $4d_0$	50	20			
20	255	304	569	56,8 71,0	68	20	186 198 176	186,7	157 152

Country of Origin: Germany

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Am Material wurden keine Reparaturschweißungen vorgenommen. / No welding repair on the material.
Material ist nicht radioaktiv oder mit Quecksilber kontaminiert. / Material is free from radioactive or mercury contamination.
Sicht- und Maßprüfungen ohne Beanstandungen. (D01) / Visual and dimensional examinations without objections.
Die Anforderungen der Bestellung sind erfüllt. / The product meets the requirements of the order specifications.
Die Angaben in Klammern entsprechen den Vorgaben der DIN EN 10168 / Data in parentheses refer to DIN EN 10168.
APZ ist mit EDV erstellt und ohne Unterschrift gültig. / MTR was electronically generated and is valid without a signature.

R. Sparing
Abnahmebeauftragter des Herstellers (Z02) / Inspection Representative of the Manufacturer

CTCERT202300004970.1.0001

MAASS GLOBAL GROUP
WILHELM MAASS GMBH

Zeche Ernestine 12-18
45141 Essen
Tel.: +49 (0) 201 – 29 49 30
Fax.: +49 (0) 201 – 29 18 75
E-Mail: info@wmaass.de
Internet: www.wmaass.de

Inspection Certificate EN 10204 3.1
Abnahmeprüfzeugnis EN 10204 3.1

Maass Special Alloys Nederland B.V.
Wattbaan 51-6
Nieuwegein, 3439 ML
Netherlands

Customer's Reference - Kundennummer
MSA23-60236
Manufacturer's Works Order No - Hersteller Auftragsnummer
2071240

Material: Werkstoff	F316 / F316L
Requirements: Anforderungen	A182/A182M:2023 // SA182/SA182M:2021 // NACE MR0175:2021 // NACE MR 0103:2015 // ISO 15156:2021 // ASME Code Sect. II Part A:2021 // ASME B16.5:2021
Heat treatment: Wärmebehandlung	Solution annealed at 1050°C, rapid cooling by quenching in cold water

Item Characteristics – Artikelmerkmale

Line Item No Position	Quantity Menge	Material Description Material Bezeichnung	Heat No Schmelz Nr	Sample No Probe	
33	30	Flange NPS 3" Class 300 SO RF (ASME B16.5)	3289	C1852	
34	100	Flange NPS 4" Class 150 SO RF (ASME B16.5)	3289	C1852	
61	75	Flange NPS 3" Class 150 WN 10S RF (ASME B16.5)	3289	C1852	
62	75	Flange NPS 3" Class 150 WN 40S RF (ASME B16.5)	3289	C1852	
64	150	Flange NPS 4" Class 150 WN 10S RF (ASME B16.5)	3289	C1852	
65	50	Flange NPS 4" Class 150 WN 40S RF (ASME B16.5)	3289	C1852	
66	50	Flange NPS 4" Class 300 WN 40S RF (ASME B16.5)	3289	C1852	
67	10	Flange NPS 5" Class 150 WN 40S RF (ASME B16.5)	3289	C1852	

Chemical analysis - Chemische Analyse

Heat No. Schmelz Nr.	Req.	C%	Si%	Mn%	P%	S%	Mo%	Cr%	Ni%	Al%	Cu%	Ti%	Co%	N%
	min	0	0	0	0	0	2,00	16,00	10,00	0	0	0	0	0
	max	0,030	1,00	2,00	0,045	0,030	3,00	18,00	15,00					0,100
3289	HA	0,017	0,35	1,44	0,043	0,015	2,03	16,85	10,05					0,085

Mechanical properties - Mechanische Eigenschaften

Heat No Schmelz Nr.	Sample No Probe	Temp. [°C]	Yield Strength Dehngrenze [N/mm²]		Tensile Strength Zugfestigkeit [N/mm²]	Elongation Bruchdehnung [%]	Reduction of Area Bruchein-schnürung [%]	Location Lage	Dimension Abmessung [Ø]
			R_p 0,2	R_p 1,0	R_m	A_4	Z		
			>205		>515	>30	>50		
3289	C1852	+20	261	304	535	55,2	72,4	transversal	12,50

Impact Strength - Kerbschlagzähigkeit

Heat No Schmelz Nr	Sample No Probe	Temp. [°C]	Impact energy Schlagarbeit [J]				Laterale expansion Laterale Breitung [mm]			Location Lage	Type Art	Dimension Abmessung
			1	2	3	Avg.						

Hardness - Härte

Sample No Probe	Hardness measurement Härtemessung	1	2	3	4	5	Avg.	Req
C1852	HBW	163	164				163,5	

Surface and dimensional check according to ASME B16.5
100% PMI with X-Ray Fluorescene (XRF) Spectro xSORT & found satisfactory
Mechanical tests according to ASTM A370
Steel made by electric furnace // Melting process = EAF/AOD
Flange facing finish according to ASME B16.5 - 2020 Cl.6.4.5
DIN ISO 9001 - 2015 - Certificate No. 01 100 2209906
This is to certify that the product described here has been manufactured, sampled, tested and inspected in accordance with purchaser order requirements.
This certificate is not a declaration of origin nor may it be used as a declaration of origin
Free from mercury and radioactive contamination
HA = Ladle Analysis // PA = Product Analysis // Req. = Requirements // Avg = Average

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Trade Mark Handelszeichen	Customer Third Party Kundendritter	WMAASS Quality Department Signature WMAASS Qualitätswesen Unterschrift	
		Head of Quality Department Murat Cengiz	Work Inspector Patrick Oberhauser

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 3" S.160 RF SCH.10/S

raccortubi Heat num. or Pcs. marking: 3289 - Qty:3,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

MAASS GLOBAL GROUP
WILHELM MAASS GMBH

Zeche Ernestine 12-18
45141 Essen
Tel.: +49 (0) 201 – 29 49 30
Fax.: +49 (0) 201 – 29 18 75
E-Mail: info@wmaass.de
Internet: www.wmaass.de

Inspection Certificate EN 10204 3.1
Abnahmeprüfzeugnis EN 10204 3.1

Additional tests - Zusätzliche Prüfungen

IGC resistant acc. ASTM A262 Pr.E: satisfactory

Company Wilhelm Maass GmbH is a AD2000 W0 and PED 2014/68/EU ANNEX I, Section 4.3 approved manufacturer

Surface and dimensional check according to ASME B16.5
100% PMI with X-Ray Fluorescene (XRF) Spectro xSORT & found satisfactory
Mechanical tests according to ASTM A370
Steel made by electric furnace // Melting process = EAF/AOD
Flange facing finish according to ASME B16.5 - 2020 Cl.6.4.5
DIN ISO 9001 - 2015 - Certificate No. 01 100 2209906
This is to certify that the product described here has been manufactured, sampled, tested and inspected in accordance with purchaser order requirements.
This certificate is not a declaration of origin nor may it be used as a declaration of origin
Free from mercury and radioactive contamination
HA = Ladle Analysis // PA = Product Analysis // Req. = Requirements // Avg = Average

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☑ Review

Trade Mark Handelszeichen	Customer Third Party Kundendritter	WMAASS Quality Department Signature WMAASS Qualitätswesen Unterschrift	
		Head of Quality Department Murat Cengiz	Work Inspector Patrick Oberhauser

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 3" S.150 RF SCH.10/S

raccortubi Heat num. or Pcs. marking: 3289 - Qty:3,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2015 CERTIFICATE No. 04 100 011022

ADM. OFFICE: 604, SUKH SAGAR, N. S. PATKAR MARG,
MUMBAI 400 007, INDIA
Tel.: 91-22- 66290600. Fax.: 91-22-66290633/34
Website : www.chandansteel.net
Email : cs1@chandansteel.net

WORKS: Plot No. 35, G. I. D. C., Umbergaon
Dist Valsad, Gujarat - 396 171, INDIA
Tel.: 91-260-256 2066 / 4367 / 1166, Fax.: 91-260-256 2287
E-mail : exports@chandansteel.net

L/c. No. :
L/c. Date:

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA
VIALE DE GASPERI, 194
20010 MARCALLO CON CASONE
(MILANO) - ITALIA

Test Certificate No. : EXP/22-23/00122 - 21
Date of Issue : 29.04.2022
P. O. No. : 00000041 S Dtd.07.02.2022
Invoice No. & Date : EXP/22-23/00122 Dt.29.04.2022

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES

Po Sr No.	Part Code	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
49	G6LWNMS150RFS40SH	CH-16628	250	47	130.70	ASTM/ASME A/SA 182 F316/316L	1/2" WNRF 150 LBS 40S	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
49	0.026	0.40	1.73	0.043	0.010	16.99	2.02	10.06	-	-	0.084	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm² ($R_{p0.2}$)	Tensile Strength N/mm² (R_m)	Elongation %	Reduction of Area %	Hardness (H. B. W.)
49	269	567	60	76	163-166
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Remarks:
1. The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions inspection OK.
3. PMI Test 100%:- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Inter-Granular Corrosion Test (ASTM A262 - 17 (Pr.B)):- Satisfactory.
7. The material conforms to ASTM A 182 - 20, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification.
8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
9. Surface roughness quality checked by comparator & found 125 - 250 AARH
10. Visual , Dimension and PMI performed by CSL and 5% witnessed by TPI
11. Mechanical Testing perfomed by CSL and Reviewed By TPI

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.

Q. A.

V.Y. NARAYAN
SR. MANAGER Q. A.

ROSETTI MARINO
Supply Management Dept.
Witness Review

F/QA/18, Rev. 00, 11.01.2018

Customer: ROSETTI MARINO S.p.A.

Order: 1724000839 - 22.04.24 - Item n.: 1130 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002010

Description: W.N. 1/2" S.150 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: CH-16628 - Qty:4,00

Protocol: CTCERC202400005072 * CERTIFIED TRUE COPY
* Issued 03-06-2024

Flanschenwerk Bebitz

Flanschenwerk Bebitz GmbH • Lebendorfer Str. 1 • 06420 Könnern OT Bebitz • GERMANY
(A01)

Abnahmeprüfzeugnis 3.1 / Inspection certificate 3.1 / Certificat de reception 3.1

nach (A02) / acc. DIN EN 10204 : 2005 Nr. (A03) / No. 22-03029 **Datum (Z02) / Date** 25.07.2022

Zeichen des Herstellers (A04) / Manufacturer's brand: [B]

Stempel des Abnehmers (Z03) / Stamp of the testing engineer: TKO 7

Überprüft als Hersteller nach AD-Merkblatt W0 / TRD100 und VdTÜV Werkstoffblätter 350/3, 354, 399 / Approved as manufacturer according AD-Merkblatt W0 / TRD100 and VdTÜV Material Sheets 350/3, 354, 399
Zertifiziert nach DGR 2014/68/EU durch TÜV NORD Systems GmbH Co. KG, notifizierte Stelle 0045 / Certified according to PED 2014/68/EU, certifying body TÜV NORD GmbH Co. KG, notified body no. 0045

Besteller (A06) Customer
RACCORTUBI S. p. A.
Viale De Gasperi 194
20010 MARCALLO CON CASONE - MILANO

Bestell-Nr (A07) / Order-No. 00000271 S
Auftrag (A08) / Order 20002158
Lieferschein / Delivery No. 30008137
Position (B07.1) / Item 22B

Stck (B08) Quantity	**Bezeichnung (B01; B09 - B11) Product**	**Schmelze/Prüflos (B07) Heat no./Test no.**
210	1 inch Welding Neck Flange 150 lbs S40s raised face Customer ID: G6LWN1S150RFS40S	CA048/1

Material (B02; B05) F 316/F 316L ASTM A182M-21 / ASME SA-182M
solution annealed > 1040 °C and quenched in water

Anford. (B03) Require-ments
ASME B16.5-2017
NACE MR0175-2015 / MR0103-2015 - DIN EN ISO 15156-3:2015 / DIN EN ISO 17945:2015
2019 ASME Boiler & Pressure Vessel Code - Section II Part A

PMI-tested 100%, IC-test acc. to DIN EN ISO 3651-2 Test A / ASTM A262 practice E

Schmelzenanalyse (C71 - C92) / Ladle analysis **Erschmelzung (C70) / Melting process** E+AOD

C	Si	Mn	P	S	Cr	Ni	Ti	Mo	Nb	V	N	Cu	Al	PREN
0,017	0,43	1,69	0,037	0,020	16,90	10,10	0,002	2,03			0,078	0,45		24,85

$$CEV = C + \frac{Mn}{6} + \frac{V + Mo + Cr}{5} + \frac{Ni + Cu}{15} \qquad PREN = Cr + 3{,}3 \times Mo + 16 \times N$$

Mechanische Prüfungen / Mechanical tests

Probenlage (C02): T / Position of Specimen: T Zugversuch / Tensile Test - ASTM A 370						KBV / Impact test DIN EN ISO 148-1 ASTM A370 (V-Kerb / V-notch)			Härte (C32) Hardness ISO 6506-1
Temp (C03) ° C	Streckgrenze (C11) / Yield 0,2% MPa (N/mm²)	1,0% MPa (N/mm²)	Zugfestigkeit (C12) Tensile MPa (N/mm²)	Dehnung (C13) Elongation %	Einschnürg. Red. of area %	Temp. (C03) ° C	Einzelwerte (C42) Single values J	MW (C43) Average J	HBW 2,5/187,5
20	min 205 max		515	30,0 $5d_0$ $4d_0$	50	20			
20	291	339	558	57,2 71,5	69	20	214 208 216	212,7	161 156

Country of Origin: Germany

ROSETTI MARINO
Supply Management Dept.
☐ Witness ☒ Review

Am Material wurden keine Reparaturschweißungen vorgenommen. / No welding repair on the material.
Material ist nicht radioaktiv oder mit Quecksilber kontaminiert. / Material is free from radioactive or mercury contamination.
Sicht- und Maßprüfungen ohne Beanstandungen. (D01) / Visual and dimensional examinations without objections.
Die Anforderungen der Bestellung sind erfüllt. / The product meets the requirements of the order specifications.
Die Angaben in Klammern entsprechen den Vorgaben der DIN EN 10168 / Data in parentheses refer to DIN EN 10168.
APZ ist mit EDV erstellt und ohne Unterschrift gültig. / MTR was electronically generated and is valid without a signature.

R. Sparing
Abnahmebeauftragter des Herstellers (Z02) / Inspection Representative of the Manufacturer

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724000994	123A90A	Q012400668

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 04.09.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 07/08/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00007518
Packing list	PLPLIS202400007477
Ns. Rif.	00002207
Vs. Rif.	1724000994 - 16.05.24

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00007518

07/08/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002207
Ordine N. P.O. number: 1724000994 - 16.05.24

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*	Immagine *Image*
19	20	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-'' L=110mm	297755	CTCERT202400005383_1.0001.TIF CTCERT202400005383_1.0002.TIF
20	30	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-'' L=90mm	103540	CTCERT202400005044_1.0001.TIF CTCERT202400005044_1.0002.TIF
21	20	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-'' L=125mm	105307	CTCERT202400005045_1.0001.TIF CTCERT202400005045_1.0002.TIF
22	20	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-'' L=120mm	78606	CTCERT202400005384_1.0001.TIF CTCERT202400005384_1.0002.TIF

PRESSBOLT

Pressbolt s.r.l. con unico socio
Partita Iva 03231770136
Via dell'Artigianato, 12 - 22078 - Turate (CO)
Tel. +39 02 96.97.98.50 - Fax +39 02 96.97.98.29
email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3168025	0	02 August 2024

Client Reference Order		Reference Order	
Number	00005879 of 17 May 2024	Number	3403009
Reference			
Item	1	Item	10
Job		Shipping ref.	3412357 of 01 August 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 3/4"-10 UNCX0110 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
297755	20	P1679760	0001230002

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.409	0.824	0.283	0.009	0.003	1.022	0.205	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	990	795	21.4	56.2

	Hardness "HB"
Required	max 321
Actual	295;295;295

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 000003168025 Rev. 000 of 02 August 2024 - Page 1/4

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 19 - Our ref.: OCVEIT202400002207

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=110mm

raccortubi Heat num. or Pcs. marking: 297755 - Qty:20,00

Protocol: CTCERC202400007518 * CERTIFIED TRUE COPY
* Issued 07-08-2024

PRESSBOLT

Pressbolt s.r.l. con unico socio
Partita Iva 03231770136
Via dell'Artigianato, 12 - 22078 - Turate (CO)
Tel. +39 02 96.97.98.50 - Fax +39 02 96.97.98.29
email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3168025	0	02 August 2024

Client Reference Order		Reference Order	
Number	00005879 of 17 May 2024	Number	3403009
Reference			
Item	1	Item	20
Job		Shipping ref.	3412357 of 01 August 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 3/4"-10 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
559914	40	P1641375	0001230003

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.730	0.190	0.011	0.005

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	307;312;309	243;258;241

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003168025 Rev. 000 of 02 August 2024 - Page 2/4

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 19 - Our ref.: OCVEIT202400002207

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 3/4-" L=110mm

raccortubi Heat num. or Pcs. marking: 297755 - Qty:20,00

Protocol: CTCERC202400007518 * CERTIFIED TRUE COPY
* Issued 07-08-2024

PRESSBOLT

Pressbolt s.r.l. con unico socio
Partita Iva 03231770136
Via dell'Artigianato, 12 - 22078 - Turate (CO)
Tel. +39 02 96.97.98.50 - Fax +39 02 96.97.98.29
email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167559	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005879 of 17 May 2024	Number	3403009
Reference			
Item	2	Item	30
Job		Shipping ref.	3411830 of 22 July 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0090 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	30	P1679759	0001225810

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.770	0.219	0.012	0.025	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1001	796	23.6	60.3

	Hardness "HB"
Required	max 321
Actual	301;300;299

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167559 Rev. 000 of 22 July 2024 - Page 1/4

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 20 - Our ref.: OCVEIT202400002207

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=90mm

raccortubi Heat num. or Pcs. marking: 103540 - Qty:30,00

Protocol: CTCERC202400007518 * CERTIFIED TRUE COPY
* Issued 07-08-2024

PRESSBOLT

Pressbolt s.r.l. con unico socio
Partita Iva 03231770136
Via dell'Artigianato, 12 - 22078 - Turate (CO)
Tel. +39 02 96.97.98.50 - Fax +39 02 96.97.98.29
email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167559	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005879 of 17 May 2024	Number	3403009
Reference			
Item	2	Item	40
Job		Shipping ref.	3411830 of 22 July 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
P0JS1900A17658	60	P1653697	0001225811

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.440	0.638	0.205	0.013	0.024

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	300;317;295	258;258;258

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167559 Rev. 000 of 22 July 2024 - Page 2/4

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 20 - Our ref.: OCVEIT202400002207

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=90mm

raccortubi Heat num. or Pcs. marking: 103540 - Qty:30,00

Protocol: CTCERC202400007518 * CERTIFIED TRUE COPY
* Issued 07-08-2024

PRESSBOLT

Pressbolt s.r.l. con unico socio
Partita Iva 03231770136
Via dell'Artigianato, 12 - 22078 - Turate (CO)
Tel. +39 02 96.97.98.50 - Fax +39 02 96.97.98.29
email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167559	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005879 of 17 May 2024	Number	3403009
Reference			
Item	3	Item	50
Job		Shipping ref.	3411830 of 22 July 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 7/8"-9 UNCX0125 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
105307	20	P1679763	0001225812

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.419	0.768	0.239	0.012	0.028	1.079	0.176	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	986.5	808.5	21.3	57.2

	Hardness "HB"
Required	max 321
Actual	295;294;293

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167559 Rev. 000 of 22 July 2024 - Page 3/4

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 21 - Our ref.: OCVEIT202400002207

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-" L=125mm

raccortubi Heat num. or Pcs. marking: 105307 - Qty:20,00

Protocol: CTCERC202400007518 * CERTIFIED TRUE COPY
* Issued 07-08-2024

Pressbolt s.r.l. con unico socio
Partita Iva 03231770136
Via dell'Artigianato, 12 - 22078 - Turate (CO)
Tel. +39 02 96.97.98.50 - Fax +39 02 96.97.98.29
email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3167559	0	22 July 2024

Client Reference Order		Reference Order	
Number	00005879 of 17 May 2024	Number	3403009
Reference			
Item	3	Item	60
Job		Shipping ref.	3411830 of 22 July 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 7/8"-9 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
22982	40	P1641376	0001225813

Chemical Analysis "%"

	C	Mn	Si	P	S	
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05	
Actual	0.450	0.720	0.230	0.012	0.025	

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	310;312;309	237;256;241

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003167559 Rev. 000 of 22 July 2024 - Page 4/4

Customer: ROSETTI MARINO S.p.A.
Order: 1724000994 - 16.05.24 - Item n.: 21 - Our ref.: OCVEIT202400002207

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-" L=125mm

raccortubi Heat num. or Pcs. marking: 105307 - Qty:20,00

Protocol: CTCERC202400007518 * CERTIFIED TRUE COPY
* Issued 07-08-2024

PRESSBOLT

Pressbolt s.r.l. con unico socio
Partita Iva 03231770136
Via dell'Artigianato, 12 - 22078 - Turate (CO)
Tel. +39 02 96.97.98.50 - Fax +39 02 96.97.98.29
email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3168025	0	02 August 2024

Client Reference Order		Reference Order	
Number	00005879 of 17 May 2024	Number	3403009
Reference			
Item	4	Item	70
Job		Shipping ref.	3412357 of 01 August 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 7/8"-9 UNCX0120 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
78606	20	P1679762	0001230004

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.43	0.76	0.27	0.018	0.028	0.99	0.2	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	947	845	18.2	59

	Hardness "HB"
Required	max 321
Actual	292;292;292

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003168025 Rev. 000 of 02 August 2024 - Page 3/4

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 22 - Our ref.: OCVEIT202400002207

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-" L=120mm

raccortubi Heat num. or Pcs. marking: 78606 - Qty:20,00

Protocol: CTCERC202400007518 * CERTIFIED TRUE COPY
* Issued 07-08-2024

PRESSBOLT

Pressbolt s.r.l. con unico socio
Partita Iva 03231770136
Via dell'Artigianato, 12 - 22078 - Turate (CO)
Tel. +39 02 96.97.98.50 - Fax +39 02 96.97.98.29
email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3168025	0	02 August 2024

Client Reference Order		Reference Order	
Number	00005879 of 17 May 2024	Number	3403009
Reference			
Item	4	Item	80
Job		Shipping ref.	3412357 of 01 August 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 7/8"-9 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
22982	40	P1688083	0001230005

Chemical Analysis "%"

	C	Mn	Si	P	S	
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05	
Actual	0.450	0.720	0.230	0.012	0.025	

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	310;312;309	263;251;257

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003168025 Rev. 000 of 02 August 2024 - Page 4/4

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 22 - Our ref.: OCVEIT202400002207

Description: Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 7/8-" L=120mm

raccortubi Heat num. or Pcs. marking: 78606 - Qty:20,00

Protocol: CTCERC202400007518 * CERTIFIED TRUE COPY
* Issued 07-08-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724000994	123A90A	Q012400606

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani **24/07/2024**

Sonia Emiliani

☒ REVIEW

☐ WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 22/07/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00006963
Packing list	PLPLIS202400006865
Ns. Rif.	00002207
Vs. Rif.	1724000994 - 16.05.24

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00006963

22/07/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002207
Ordine N. P.O. number: 1724000994 - 16.05.24

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura *Heat N° or PCS. Marking*	Pz. Immagine *Image*
13	5	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 4''	5876	CTCERT202400004927_1.0001.TIF CTCERT202400004927_1.0002.TIF CTCERT202400004927_1.0003.TIF
14	5	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 8''	5876	CTCERT202400004927_1.0001.TIF CTCERT202400004927_1.0002.TIF CTCERT202400004927_1.0003.TIF
15	5	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 10''	5876	CTCERT202400004927_1.0001.TIF CTCERT202400004927_1.0002.TIF CTCERT202400004927_1.0003.TIF
16	5	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 12''	5876	CTCERT202400004927_1.0001.TIF CTCERT202400004927_1.0002.TIF CTCERT202400004927_1.0003.TIF

CTCERT202400004927.1.0001

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466323007
Invoice/ddt No: 3007
Invoice/ddt date: 18/07/2024

CERTIFICATE OF CONFORMITY EN 10204 3.1

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00005876**

Gasket description:

Spiral Wound Gasket 316L/FG/IR_316L/OR_CS

Material Designations:

ASTM:	**A240 Tp.316L**
EN No:	**1.4404**
DIN:	**X2 CrNiMo17-13-2**
OTHERS:	

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted.**
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE

Customer: ROSETTI MARINO S.p.A. Order: 1724000994 - 16.05.24 - Item n.: 13 - Our ref.: OCVEIT202400002207

Description: Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 4"

raccortubi Heat num. or Pcs. marking: 5876 - Qty:5,00 Protocol: CTCERC202400006963 * CERT 522/996 UE COPY
* Issued 22-07-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
SWG 316L/FG/316L/CS 4" 150 Code :	5,000
SWG 316L/FG/316L/CS 8" 150 Code :	5,000
SWG 316L/FG/316L/CS 10" 150 Code :	5,000
SWG 316L/FG/316L/CS 12" 150 Code :	5,000

A240 Tp.316L windings.

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	N%
max	0.030	2.00	0.045	0.015	1,00	18.00	14.00	2,50	0.10
min						16.00	10.00	2.00	
actual	0.017	1.274	0.031	0.001	0.335	16.715	10.01	2.021	0.042

Heat No: L4WJ

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yield strength Rp 0.2 MPa	Elongation 50mm %	Hardness HB
Min.485	Min.170	40	Max.160
620	285	52	135

Graphite filler

MECHANICAL PROPERTIES

ASTM F 152 N/mm²	ASTM C 695 N/mm²	ASTM F 36 %	Friction coeff ///
>4.5	170	>40	0.05 – 0.14

C (ASTM C 571) %	S (ASTM C 816) Ppm	Cl (ASTM D 512) ppm	F (ASTM D 3868) Ppm	Ash (ASTM C 561) %
>98	<1000	<50	<50	<0.5

Corrosion inhibitor: Zn <1%

Quality Assurance:

CF SERVICE

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 13 - Our ref.: OCVEIT202400002207

Description: Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 4"

raccortubi Heat num. or Pcs. marking: 5876 - Qty:5,00

Protocol: CTCERC202400006963 * CERTIFICATE COPY
* Issued 22-07-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

A240 Tp.316L ring

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	N%
max	0.03	2.00	0.045	0.030	0.75	18.00	14.00	3.00	0.10
min						16.00	10.00	2.00	
actual	0.016	1.081	0.0317	0.0025	0.365	16.787	10.208	2.155	0.0206

Heat No: 433396

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yeld strength Rp 0.2 MPa	Elongation 50mm %	Hardness HRB
Min.485	Min.170	Min.40	Max 95
583	270	51.9	78

Carbon Steel type EN 10111:2006 DD12 outer ring

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%
max	0.10	0.45	0.024	0.035
min				
actual	0.05	0.33	0.015	0.024

Heat No: 280209

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yield strength Rp 0.2 MPa	Elongation 50mm %
Max.420	170 : 320	Min.30
416	307	31

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466323007
Invoice/ddt No: 3007
Invoice/ddt date: 18/07/2024

CERTIFICATE OF CONFORMITY EN 10204 3.1

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00005876**

Gasket description:

Spiral Wound Gasket 316L/FG/IR_316L/OR_CS

Material Designations:

ASTM:	**A240 Tp.316L**
EN No:	**1.4404**
DIN:	**X2 CrNiMo17-13-2**
OTHERS:	

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted.**
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 14 - Our ref.: OCVEIT202400002207

Description: Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 8"

raccortubi Heat num. or Pcs. marking: 5876 - Qty:5,00

Protocol: CTCERC202400006963 * CERTIFIED TRUE COPY
* Issued 22-07-2024

CF®
CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
SWG 316L/FG/316L/CS 4" 150 Code :	5,000
SWG 316L/FG/316L/CS 8" 150 Code :	5,000
SWG 316L/FG/316L/CS 10" 150 Code :	5,000
SWG 316L/FG/316L/CS 12" 150 Code :	5,000

A240 Tp.316L windings.

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	N%
max	0.030	2.00	0.045	0.015	1,00	18.00	14.00	2,50	0.10
min						16.00	10.00	2.00	
actual	0.017	1.274	0.031	0.001	0.335	16.715	10.01	2.021	0.042

Heat No: L4WJ

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yield strength Rp 0.2 MPa	Elongation 50mm %	Hardness HB
Min.485	Min.170	40	Max.160
620	285	52	135

Graphite filler

MECHANICAL PROPERTIES

ASTM F 152 N/mm²	ASTM C 695 N/mm²	ASTM F 36 %	Friction coeff ///
>4.5	170	>40	0.05 – 0.14

C (ASTM C 571) %	S (ASTM C 816) Ppm	Cl (ASTM D 512) ppm	F (ASTM D 3868) Ppm	Ash (ASTM C 561) %
>98	<1000	<50	<50	<0.5

Corrosion inhibitor: Zn <1%

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5950900
P.IVA 04184610271 - info@cfservice.net

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

A240 Tp.316L ring

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	N%
max	0.03	2.00	0.045	0.030	0.75	18.00	14.00	3.00	0.10
min						16.00	10.00	2.00	
actual	0.016	1.081	0.0317	0.0025	0.365	16.787	10.208	2.155	0.0206

Heat No: 433396

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yeld strength Rp 0.2 MPa	Elongation 50mm %	Hardness HRB
Min.485	Min.170	Min.40	Max 95
583	270	51.9	78

Carbon Steel type EN 10111:2006 DD12 outer ring

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%
max	0.10	0.45	0.024	0.035
min				
actual	0.05	0.33	0.015	0.024

Heat No: 280209

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yield strength Rp 0.2 MPa	Elongation 50mm %
Max.420	170 : 320	Min.30
416	307	31

Quality Assurance:

CF SERVICE

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 14 - Our ref.: OCVEIT202400002207

Description: Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 8"

raccortubi Heat num. or Pcs. marking: 5876 - Qty:5,00

Protocol: CTCERC202400006963 * CERTIFICATE ISSUE COPY
* Issued 22-07-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466323007
Invoice/ddt No: 3007
Invoice/ddt date: 18/07/2024

CERTIFICATE OF CONFORMITY EN 10204 3.1

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00005876**

Gasket description:

Spiral Wound Gasket 316L/FG/IR_316L/OR_CS

Material Designations:

ASTM:	**A240 Tp.316L**
EN No:	**1.4404**
DIN:	**X2 CrNiMo17-13-2**
OTHERS:	

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted.**
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE

Customer: ROSETTI MARINO S.p.A. Order: 1724000994 - 16.05.24 - Item n.: 15 - Our ref.: OCVEIT202400002207

Description: Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 10"

raccortubi Heat num. or Pcs. marking: 5876 - Qty:5,00

Protocol: CTCERC202400006963 * CERTIFIED TRUE COPY
* Issued 22-07-2024

CF®
CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
SWG 316L/FG/316L/CS 4" 150 Code :	5,000
SWG 316L/FG/316L/CS 8" 150 Code :	5,000
SWG 316L/FG/316L/CS 10" 150 Code :	5,000
SWG 316L/FG/316L/CS 12" 150 Code :	5,000

A240 Tp.316L windings.

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	N%
max	0.030	2.00	0.045	0.015	1,00	18.00	14.00	2,50	0.10
min						16.00	10.00	2.00	
actual	0.017	1.274	0.031	0.001	0.335	16.715	10.01	2.021	0.042

Heat No: L4WJ

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yield strength Rp 0.2 MPa	Elongation 50mm %	Hardness HB
Min.485	Min.170	40	Max.160
620	285	52	135

Graphite filler

MECHANICAL PROPERTIES

ASTM F 152 N/mm²	ASTM C 695 N/mm²	ASTM F 36 %	Friction coeff ///
>4.5	170	>40	0.05 – 0.14

C (ASTM C 571) %	S (ASTM C 816) Ppm	Cl (ASTM D 512) ppm	F (ASTM D 3868) Ppm	Ash (ASTM C 561) %
>98	<1000	<50	<50	<0.5

Corrosion inhibitor: Zn <1%

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

A240 Tp.316L ring

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	N%
max	0.03	2.00	0.045	0.030	0.75	18.00	14.00	3.00	0.10
min						16.00	10.00	2.00	
actual	0.016	1.081	0.0317	0.0025	0.365	16.787	10.208	2.155	0.0206

Heat No: 433396

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yeld strength Rp 0.2 MPa	Elongation 50mm %	Hardness HRB
Min.485	Min.170	Min.40	Max 95
583	270	51.9	78

Carbon Steel type EN 10111:2006 DD12 outer ring

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%
max	0.10	0.45	0.024	0.035
min				
actual	0.05	0.33	0.015	0.024

Heat No: 280209

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yield strength Rp 0.2 MPa	Elongation 50mm %
Max.420	170 : 320	Min.30
416	307	31

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. +39 041.595900 Fax 041.595900
P.IVA 04107271 - info@cfservice.net

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466323007
Invoice/ddt No: 3007
Invoice/ddt date: 18/07/2024

CERTIFICATE OF CONFORMITY EN 10204 3.1

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00005876**

Gasket description:

Spiral Wound Gasket 316L/FG/IR_316L/OR_CS

Material Designations:

ASTM:	**A240 Tp.316L**
EN No:	**1.4404**
DIN:	**X2 CrNiMo17-13-2**
OTHERS:	

DECLARATION

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Visual and dimensional checking: **accepted.**
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
SWG 316L/FG/316L/CS 4" 150 Code :	5,000
SWG 316L/FG/316L/CS 8" 150 Code :	5,000
SWG 316L/FG/316L/CS 10" 150 Code :	5,000
SWG 316L/FG/316L/CS 12" 150 Code :	5,000

A240 Tp.316L windings.

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	N%
max	0.030	2.00	0.045	0.015	1,00	18.00	14.00	2,50	0.10
min						16.00	10.00	2.00	
actual	0.017	1.274	0.031	0.001	0.335	16.715	10.01	2.021	0.042

Heat No: L4WJ

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yield strength Rp 0.2 MPa	Elongation 50mm %	Hardness HB
Min.485	Min.170	40	Max.160
620	285	52	135

Graphite filler

MECHANICAL PROPERTIES

ASTM F 152 N/mm²	ASTM C 695 N/mm²	ASTM F 36 %	Friction coeff ///
>4.5	170	>40	0.05 – 0.14

C (ASTM C 571) %	S (ASTM C 816) Ppm	Cl (ASTM D 512) ppm	F (ASTM D 3868) Ppm	Ash (ASTM C 561) %
>98	<1000	<50	<50	<0.5

Corrosion inhibitor: Zn <1%

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

A240 Tp.316L ring

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	N%
max	0.03	2.00	0.045	0.030	0.75	18.00	14.00	3.00	0.10
min						16.00	10.00	2.00	
actual	0.016	1.081	0.0317	0.0025	0.365	16.787	10.208	2.155	0.0206

Heat No: 433396

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yeld strength Rp 0.2 MPa	Elongation 50mm %	Hardness HRB
Min.485	Min.170	Min.40	Max 95
583	270	51.9	78

Carbon Steel type EN 10111:2006 DD12 outer ring

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%
max	0.10	0.45	0.024	0.035
min				
actual	0.05	0.33	0.015	0.024

Heat No: 280209

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yield strength Rp 0.2 MPa	Elongation 50mm %
Max.420	170 : 320	Min.30
416	307	31

Quality Assurance:

CF SERVICE

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724000994	123A90A	Q012400405

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani

06.06.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 03/06/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00005104
Packing list	PLPLIS202400005074
Ns. Rif.	00002207
Vs. Rif.	1724000994 - 16.05.24

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00005104

03/06/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002207
Ordine N. P.O. number: 1724000994 - 16.05.24

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
1	1	CAPS 12" SCH.20	633449 CTCERT202400003466_1.0001.TIF
2	6	CURVE 90° LR 4" STD SEAMLESS	X98Z CTCERT202400003470_1.0001.TIF
3	40	CURVE 90° LR 3" STD SEAMLESS	130896 CTCERT202400003572_1.0001.TIF
6	1	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 8''	20/45664 CTCERT202400003593_1.0001.TIF
7	2	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 4''	22/76507 CTCERT202400003594_1.0001.TIF
8	1	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 10''	23/39601 CTCERT202400003595_1.0001.TIF
9	2	Flange WN ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 4'' thk6,02mm	022203591 CTCERT202400003596_1.0001.TIF
10	1	Flange WN ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 8'' thk6,35mm	23/39601 CTCERT202400003597_1.0001.TIF
11	1	Flange WN ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 10'' thk6,35mm	22/36388 CTCERT202400003598_1.0001.TIF
12	2	Flange WN ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 12'' thk6,35mm	22/35031 CTCERT202400003599_1.0001.TIF
23	5	TEE RID. 4"x3" STD SEAMLESS	J4KB349 CTCERT202400003795_1.0001.TIF
25	1	TEE RID. 12"x8" SCH.20 SEAMLESS	453686 CTCERT202400003469_1.0001.TIF
26	1	TEE RID. 12"x10" SCH.20 SEAMLESS	948456 CTCERT202400003849_1.0001.TIF

CENA ITALY

VIRGILIO CENA & FIGLI S.p.A.

www.cenafittings.com
Via G. Oberdan, 39 – 25128 – BRESCIA (ITALY)

QMS approved acc.to ISO 9001:2015
LRQA Cert. N° 10082605 according to
Annex I, Chapt. 4.3 PED 2014/68/EU

Issued in agreement with TÜV SÜD Industrie
Service GmbH (05.1992) and approved according
to PED, annex I, para 4.3 by Notified body 0036,
cert. n. DGR-QS-W 024/2002/MUC-001

CERTIFICATO DI COLLAUDO EN 10204/3.1
INSPECTION CERTIFICATE EN 10204/3.1

CE22012089_3.1_01

Ordine Cliente *Customer Order*	MT10314/LA0000761	Vostro rifer. 2200
Prodotto/Norme *Article/Specification*	Fondelli senza saldatura \ Seamless caps WPL6 ASTM A420/420M-19, ASME II Part.A-2019 SA420/SA420M, WPB ASTM A234/234M-18A, ASME II Part.A-2019 SA234/SA234M, ASME B16.9-18, NACE MR0175/ISO15156-2015, NACE MR0103/ISO17945-2016 ASME II Part.D-2019 Tab.Y1	
Trattamento Termico *Heat Treatment*	Formato a freddo - Normalizzato a 900°C per 1,5'/mm Cold formed - Normalized at 900°C,holding 1,5'/mm	Marchio del produttore / Brand of manufacturer: **CENA**
Marcatura *Marking*	Manufacturer - Od xTh- A/SA WPB - A/SA420 WPL6 - Heat Nr	

Descrizione della fornitura / *Extent of material delivered*	Our pos.	Quantità / Quantity	Tipo di prodotto / Article
	OV22000013/10000	NR 2	12" Sch.20

Colata / *Heat*	Codice marcato	Certificato / *Certificate*	Fornitore materia base / *Base material supplier*
633449	633449	73570	

Materiale di partenza / *Raw material*: Hot rolled heavy plate Gr.60 SA-516/SA516M

Risultati analisi chimica % — *Results of chemical analysis %* — *Ceq: C+ (Mn/6) + (Cr +Mo + V)/5 + (Cu + Ni)/15*

	C	Mn	Si	P	S	Cu	Ni	Cr	Mo	Al	Ti	Nb	V	N	B	Ceq	Pcm	Jfact.
min.		0,2900	0,1000															
max.	0,3000	1,6500		0,0500	0,0580	0,4000	0,4000	0,4000	0,1500				0,0800					
Ladle	0,0900	1,0200	0,2300	0,0090	0,0070	0,1000	0,0300	0,0700	0,0050	0,0590	0,0010	0,0020	0,0020			0,2800		
Check																		

Prove meccaniche / Mechanical Tests: Sui raccordi / On fittings

Prova Specimen	Posizione Position	Direzione Direction	Temperatura °C Temperature °C	Dimensione mm Dimension mm	Snervamento N/mm² Yield Point N/mm²	Rottura N/mm² Tensile Strength N/mm²	Allungamento % Elongation % 2"	Ys / Ts	Durezza Hardness HB 10% of batch 3 tests min.	Resilienza - Tipo di provetta = KV Impact Test - Specimen = KV: Posizione Position	Direzione Direction	Temperatura °C Temperature °C	Dimensione mm Dimension mm	Energia ottenuta Obtained energy Joule: Valore Values			Media Average	Area duttile Shear Area %: Valore Values			
30632	A	L	20		322	437	38,6	0,74	137	A		-45	10x5	56,0	50,0	53,0	53,0				

I tubi sono stati sottoposti a prova di tenuta. / The pipes are tested on tightness.

Processo di fabbricazione dell'acciaio / Steel making process:

Specimen position: A=neutral axis of base material; W=weld; E=extrados of base material; I=intrados of base material; Z=heat affected zone

Results of visual and dimensional inspection of fittings: SATISFACTORY Supplied products are in compliance with the requirements of the order The values of elongation and impact-test are according to PED 2014/68/UE The steel is fully killed and produced to a fine grain practice. Product is free of weld repair. Product is free of mercury and radiation contamination.
30632: Rp = 46702 psi - Rm = 63381 psi

Data / *Date*: 18/01/22
DTV2200050

Ente Certificatore / *Inspection*

Il Capo Collaudo / *Quality Control Manager*: **BUTTURINI RICCARDO**

QUESTO DOCUMENTO È REDATTO CON L'AUSILIO INFORMATICO ED È VALIDO SENZA FIRMA. MODIFICHE O USI PER ALTRI PRODOTTI SARANNO PERSEGUITI A TERMINE DI LEGGE QUALI FALSIFICAZIONE DI DOCUMENTI E FRODE.
THIS DOCUMENT HAS BEEN ISSUED WITH THE INFORMATIC HELP AND IT IS VALID WITHOUT A SIGNATURE. MODIFICATIONS OR ELSE OTHER PRODUCTS USE WILL BE PERSECUTED ACCORDING TO THE LAW AS FALSIFICATION OF DOCUMENTS OR FRAUD.

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 1 - Our ref.: OCVEIT202400002207

Description: CAPS 12" SCH.20

raccortubi Heat num. or Pcs. marking: 633449 - Qty:1,00

Protocol: CTCERC202400005104 * CERTIFIED TRUE COPY
* Data 06-06-2024

INTERFIT

GQ-0001T

N° de Cde Usine
Mill Ref 2400051 021
Werks-Nr 2400505

N° Certificat
Certificate Nr
Zeugnis Nr 24-01511

INTERFIT
B.P 10132 59602 MAUBEUGE FRANCE
Tél : 03.27.69.11.01

Raccords sans soudure à Souder
Seamless Bult Welding Fittings
Nahtlose Schweissformstücke

Client :
Consignee
Besteller

INSPECTION CERTIFICATE

EN 10204 3.1(2004)

Cde Client N° : LS-0000008 (WPL6)
Your Order Nr
Bestell-Nr

Spécifications :
Specifications :
Spezifikationen :

Acier et Normes
Steel and Standard
Werkstoff und Norm

Matière de départ — Tubes sans soudure / Seamless Tube / Nahtlose Rohre — INTERPIPE
Raw Material / Werkstoff — Acier procédé Electrique / Electric Steel / Elektroofenstahl — Acier calmé / Killed Steel / beruhigter Stahl

Etat de livraison
Delivery Condition / Lieferzustand

Marquage
Marking / Stempelung
Sur pièces en creux low stress
Low stress hard stamp
Kennzeichnung auf dem Fitting durch kerbfreie Einprägung

If 4" STD WPL6 FR 114 6.3 EN2 P265NL A420 X98Z
FR = FRANCE
V = If

Poste N° *Item Nr Pos Nr*	Nombre *Number Stückzahl*	N° Certificat Matière Raw Material *Rohrzeugnis Nr*	Code *Marking Markierung*	Coulée N° *Heat Nr Schmelze*	Dimensions / *Sizes* / *Abmessungen*
021	1000	24A1733	X98Z	1240440	90° 3D 114.3 X 6.30 / LR 90° 4" STD WPL6 BELGY5P90460200000S CALR 90 4" STD WPL6

CARACTERISTIQUES CHIMIQUES - *CHEMICAL ANALYSIS - SCHMELZENANALYSE*

Product analysis

Coulée N° *Heat Nr Schmelze*		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Al	Sn	Ti	Nb	B
	mini		0.150	0.600								0.020				
	maxi	0.200	0.400	1.350	0.025	0.010	0.300	0.080	0.300	0.300	0.020			0.040	0.020	
1240440		0.09	0.19	1.18	0.010	0.002	0.10	0.05	0.13	0.18	0.001	0.024		0.001	0.001	

Carbone équivalent / *Carbon equivalent / Kohlenstoffäquivalent* (*Maxi : 0.41*)
CF : C + (Mn / 6) = 0,287 LF : C + (Mn / 6) + ((Cr + V + Mo) / 5) + ((Cu + Ni) / 15) = 0,338

CARACTERISTIQUES MECANIQUES
MECHANICAL PROPERTIES - MECHANISCHE EIGENSCHAFTEN

Sur Pièces
On Fittings
am Fittings

Essais de Traction / *Tensile Tests / Zugversuch* — *Room temperature* — *longitudinal direction*

Limite Elastique *Yield Point / Streckgrenze*	Résistance Rupture *Tensile strength / Zugfestigkeit*	Allongement *Elongation / Dehnung*	Dureté *Hardness test on fittings Härte HBW*
Re ≥ 265 MPa	415 ≤ Rm ≤ 570 MPa	2" A% ≥ 30	
346 MPa	511 MPa	2" 33,1 %	162 161 165 158

Résilience / Impact Test / Kerbschlagarbeit : *Sur pièces / On fittings / am Fittings*

Essai Test Versuch	Test 1	Test 2	Test 3	Moyenne : Unité Mean : Units Mittelwert : Einheit	Type : KV Specimen Muster	Température -50° Celsius or -58°F
Kvc 10x2.5	≥ 7	≥ 7	≥ 7	≥ 10		KV >= 40J (long.) at -40°C
Kvc 10x10	≥ 30	≥ 30	≥ 30	≥ 40		The results at -50°C fulfill the requirements at -40°C
24-00247	27,5	29,4	29	28,6	10 x 2.5 mm	Long / Long / Längs
24-00247	110	117,6	116	114,5	10 x 10 mm	Long / Long / Längs

Date : 19/04/2024
LE RESPONSABLE QUALITE
F. FRIART

WE CERTIFY THAT THE DELIVERED PRODUCTS WERE MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION OF THE ORDER.

INTERFIT GARANTIT QUE LE PRODUIT DU CERTIFICAT,RESPECTE LES PRESCRIPTIONS ART15 DU A.M 24/03/78 MODIFIE:C<=0.25,P<0.05,S<0.05,R<=700N/mm2 ,E<=0.9xR,A%(Lo=5.65VSo)min.16%long.R(A-2)>=10500, A%(Lo=5.65VSo)min.14% en transv.RxA>=10500

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 2 - Our ref.: OCVEIT202400002207

Description: CURVE 90° LR 4" STD SEAMLESS

raccortubi Heat num. or Pcs. marking: X98Z - Qty:6,00

Protocol: CTCERC202400005104 * CERTIFICATE COPY
* Issued 03-06-2024

CTCERT202400003572.1.0001

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	4724-P10	24/05/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00005889	

	Item	Quantity	Heat id.
10	ELBOW 3" STD 90° LR WPL6	40,00	130896

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED
Heat Treatment	FORMED UNDER NORMALIZING COND. TEMPERATURE 780°C - 980°C / COOLING STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Al%	Ti%	Nb%
0,177	0,890	0,220	0,008	0,003	0,100	0,140	0,050	0,240	0,006	0,035	0,0210	0,0050

CE_{IIW} 0,39

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	323	531	32

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
2.5 X 10	0,2	Base Mat.	34	31	30	32

Hardness Test

Base Metal Avg 138 HBW

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature
This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 3 - Our ref.: OCVEIT202400002207

Description: CURVE 90° LR 3" STD SEAMLESS

raccortubi Heat num. or Pcs. marking: 130896 - Qty:40,00

Protocol: CTCERC202400005104 * CERTIFICATE ISSUE COPY
* Issued 03-06-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — Nr A03 2024-C_MFF-01283 — Data / Dated 23.05.2024 Z02

RACCORTUBI S.P.A. A06	**Ordine / PO**	5875 A07
Viale Lidice 38/40/42	**Item**	001 A07
10095 GRUGLIASCO TO IT	**DDT / Delivery note**	2024-3E301-0001259 A10
	Packing List	2024-3E401-0001269 A11
	Fattura / Invoice	2024-3E401-0001269 A12
	Ns. rif. / Our ref.	2024-3E201-0000845-0001 A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	20/45664	1,00	BLIND 150 RF 8" LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,195	0,230	1,040	0,006	0,006	0,100	0,060	0,020	0,021	0,100	0,002	0,001	0,010
PRODUCT ANALYSIS	0,192	0,238	1,045	0,003	0,008	0,113	0,051	0,011	0,019	0,108	0,003	0,002	0,007

	Al	CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,032	0,403	0,368	0,282	0,120	--
PRODUCT ANALYSIS	0,027	0,402	0,366	0,286	0,124	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta / Test specimen C10		Forma / Shape C10	°C C03	Snervamento>0,2% / Yield Strength>0,2% C11	Snervamento>1,0% / Yield Strength>1,0% C11	Rottura / Tensile C12	Allungamento / Elongation C13	Contrazione / Reduction of area C14
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
126,60	50,80	1	20	343,0	--	508,0	36,0	68,0

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST					
HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
145,0 ; 150,0	KV	10x10 mm	-46	47	61	55	54,3

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. / Marking in acc. to B06	ANSI/MSS SP-25-2018	Vis. & Dim. D01	SATISFACTORY	Origine / Origin of Steel B16	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION
Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D. Gaffuri		MFF

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — Nr A03 2024-C_MFF-01283 — Data / Dated 23.05.2024 Z02

RACCORTUBI S.P.A. A06		**Ordine / PO**	5875 A07
Viale Lidice 38/40/42		**Item**	002 A07
10095 GRUGLIASCO TO IT		**DDT / Delivery note**	2024-3E301-0001259 A10
		Packing List	2024-3E401-0001269 A11
		Fattura / Invoice	2024-3E401-0001269 A12
		Ns. rif. / Our ref.	2024-3E201-0000845-0002 A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata Heat Code B07	Nr. colata Heat Nr B07	Quantità Quantity B08	Descrizione Description B01 - (B09 - B11)
	22/76507	2,00	BLIND 150 RF 4" LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,185	0,220	1,040	0,005	0,011	0,080	0,050	0,010	0,015	0,160	0,002	0,002	0,010
PRODUCT ANALYSIS	0,187	0,218	1,035	0,006	0,010	0,078	0,052	0,012	0,013	0,162	0,004	0,003	0,011

	Al	CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,025	0,391	0,358	0,302	0,090	--
PRODUCT ANALYSIS	0,027	0,393	0,360	0,308	0,090	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta C10 Test specimen Sez/Sect mm2	Gauge L.mm	Forma C10 Shape 1=O - 2=□	°C C03	Snervamento>0,2% C11 Yield Strength>0,2% MPa	Snervamento>1,0% C11 Yield Strength>1,0% MPa	Rottura C12 Tensile MPa	Allungamento C13 Elongation %	Contrazione C14 Reduction of area %
126,60	50,80	1	20	326,0	--	516,0	30,4	62,8

DUREZZA / HARDNESS C30 HBW C31	RESILIENZA / IMPACT TEST Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
154,0 ; 152,0	KV	10x10x55 mm	-46	67	60	63	63,3

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. B06 Marking in acc. to	Vis. & Dim. D01	Origine B16 Origin of Steel
ANSI/MSS SP-25-2018	SATISFACTORY	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION
Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

UFFICIO CONTROLLO QUALITA' A05 QUALITY CONTROL DEPARTMENT	ENTE UFFICIALE DI COLLAUDO Z03 INSPECTION AUTHORITY	MARCHIO PRODUZIONE A04 MANUFACTURER'S SYMBOL
D. Gaffuri		MFF

MIM30800 del 29/08/2023

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 7 - Our ref.: OCVEIT202400002207

Description: Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 4"

raccortubi Heat num. or Pcs. marking: 22/76507 - Qty:2,00

Protocol: CTCERC202400005104 * CERTIFIED TRUE COPY
* Issued 03-06-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001	METALFAR	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — Nr A03 2024-C_MFF-01283 — Data / Dated 23.05.2024 Z02

RACCORTUBI S.P.A. A06 Viale Lidice 38/40/42 10095 GRUGLIASCO TO IT	**Ordine / PO**	5875	A07
	Item	003	A07
	DDT / Delivery note	2024-3E301-0001259	A10
	Packing List	2024-3E401-0001269	A11
	Fattura / Invoice	2024-3E401-0001269	A12
	Ns. rif. / Our ref.	2024-3E201-0000845-0003	A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	23/39601	1,00	BLIND 150 RF 10" LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,185	0,250	1,070	0,007	0,011	0,130	0,070	0,020	0,021	0,170	0,001	0,001	0,010
PRODUCT ANALYSIS	0,180	0,221	1,030	0,005	0,012	0,106	0,070	0,018	0,015	0,156	0,003	0,003	0,010

	Al	CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,030	0,410	0,363	0,391	0,150	--
PRODUCT ANALYSIS	0,035	0,392	0,352	0,353	0,124	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta / Test specimen C10		Forma / Shape C10	°C C03	Snervamento>0,2% / Yield Strength>0,2% C11	Snervamento>1,0% / Yield Strength>1,0% C11	Rottura / Tensile C12	Allungamento / Elongation C13	Contrazione / Reduction of area C14
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
126,60	50,80	1	20	387,0	--	534,0	32,1	72,9

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST					
HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
154,0 ; 157,0	KV	10x10x55 mm	-46	55	47	60	54,0

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. / Marking in acc. to B06	ANSI/MSS SP-25-2018	Vis. & Dim. D01	SATISFACTORY	Origine / Origin of Steel B16	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D. Gaffuri		MFF

MIM30800 del 29/08/2023

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 8 - Our ref.: OCVEIT202400002207

Description: Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 10"

raccortubi Heat num. or Pcs. marking: 23/39601 - Qty:1,00

Protocol: CTCERC202400005104 * CERTIFIED ISSUE COPY
* Issued 03-06-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — **Nr** A03 2024-C_MFF-01283 — **Data / Dated** 23.05.2024 Z02

RACCORTUBI S.P.A. A06 Viale Lidice 38/40/42 10095 GRUGLIASCO TO IT	**Ordine / PO**	5875	A07
	Item	004	A07
	DDT / Delivery note	2024-3E301-0001259	A10
	Packing List	2024-3E401-0001269	A11
	Fattura / Invoice	2024-3E401-0001269	A12
	Ns. rif. / Our ref.	2024-3E201-0000845-0004	A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	022203591	2,00	W/N 150 RF 4" STD LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,190	0,220	1,030	0,002	0,009	0,070	0,040	0,010	0,018	0,070	0,004	0,001	0,009
PRODUCT ANALYSIS	0,195	0,226	1,035	0,004	0,010	0,071	0,042	0,011	0,019	0,071	0,005	0,001	0,010

	Al	CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,026	0,386	0,362	0,194	0,080	--
PRODUCT ANALYSIS	0,027	0,392	0,368	0,200	0,082	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta / Test specimen C10		Forma / Shape C10	°C C03	Snervamento>0,2% / Yield Strength>0,2% C11	Snervamento>1,0% / Yield Strength>1,0% C11	Rottura / Tensile C12	Allungamento / Elongation C13	Contrazione / Reduction of area C14
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
126,60	50,80	1	20	356,0	--	535,0	35,0	73,1

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST					
HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
160,0 ; 165,0	KV	10x10x55 mm	-46	94	101	86	93,7

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020 ; ASME/ANSI B36.10M -2022		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. / Marking in acc. to B06	ANSI/MSS SP-25-2018	Vis. & Dim. D01	SATISFACTORY	Origine / Origin of Steel B16	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D. Gaffuri		MFF

MIM30800 del 29/08/2023

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 9 - Our ref.: OCVEIT202400002207

Description: Flange WN ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 4" thk6,02mm

raccortubi Heat num. or Pcs. marking: 022203591 - Qty:2,00

Protocol: CTCERC202400005104 * CERTIFICATE COPY
* Issued 03-06-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — Nr A03 2024-C_MFF-01283 — Data / Dated 23.05.2024 Z02

RACCORTUBI S.P.A. A06		**Ordine / PO**	5875 A07
Viale Lidice 38/40/42		**Item**	005 A07
10095 GRUGLIASCO TO IT		**DDT / Delivery note**	2024-3E301-0001259 A10
		Packing List	2024-3E401-0001269 A11
		Fattura / Invoice	2024-3E401-0001269 A12
		Ns. rif. / Our ref.	2024-3E201-0000845-0005 A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata Heat Code B07	Nr. colata Heat Nr B07	Quantità Quantity B08	Descrizione Description B01 - (B09 - B11)
	23/39601	1,00	W/N 150 RF 8" 20 LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,185	0,250	1,070	0,007	0,011	0,130	0,070	0,020	0,021	0,170	0,001	0,001	0,010
PRODUCT ANALYSIS	0,180	0,221	1,030	0,005	0,012	0,106	0,070	0,018	0,015	0,156	0,003	0,003	0,010

	Al	CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,030	0,410	0,363	0,391	0,150	--
PRODUCT ANALYSIS	0,035	0,392	0,352	0,353	0,124	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta Test specimen C10		Forma Shape C10	°C C03	Snervamento>0,2% Yield Strength>0,2% C11	Snervamento>1,0% Yield Strength>1,0% C11	Rottura Tensile C12	Allungamento Elongation C13	Contrazione Reduction of area C14
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
126,60	50,80	1	20	387,0	--	534,0	32,1	72,9

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST					
HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
154,0 ; 157,0	KV	10x10x55 mm	-46	55	47	60	54,0

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020 ; ASME/ANSI B36.10M -2022		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. / Marking in acc. to B06	ANSI/MSS SP-25-2018	Vis. & Dim. D01	SATISFACTORY	Origine / Origin of Steel B16	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION
Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D. Gaffuri		MFF

MIM30800 del 29/08/2023

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 10 - Our ref.: OCVEIT202400002207

Description: Flange WN ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 8" thk6,35mm

raccortubi Heat num. or Pcs. marking: 23/39601 - Qty:1,00

Protocol: CTCERC202400005104 * CERTIFIED TRUE COPY
* Issued 03-06-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — Nr A03 2024-C_MFF-01283 — Data / Dated 23.05.2024 Z02

RACCORTUBI S.P.A. A06	**Ordine / PO**	5875 A07
Viale Lidice 38/40/42	**Item**	006 A07
10095 GRUGLIASCO TO IT	**DDT / Delivery note**	2024-3E301-0001259 A10
	Packing List	2024-3E401-0001269 A11
	Fattura / Invoice	2024-3E401-0001269 A12
	Ns. rif. / Our ref.	2024-3E201-0000845-0006 A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	22/36388	1,00	W/N 150 RF 10" 20 LF2CL1

Mat. in acc. a / Mat. in acc. to B02
ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,185	0,240	1,040	0,005	0,009	0,090	0,060	0,010	0,017	0,110	0,001	0,000	0,009
PRODUCT ANALYSIS	0,183	0,249	1,048	0,002	0,005	0,099	0,067	0,015	0,020	0,097	0,003	0,001	0,006

	Al	CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,030	0,390	0,358	0,271	0,100	--
PRODUCT ANALYSIS	0,025	0,392	0,358	0,281	0,114	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta / Test specimen C10		Forma / Shape C10	°C C03	Snervamento>0,2% / Yield Strength>0,2% C11	Snervamento>1,0% / Yield Strength>1,0% C11	Rottura / Tensile C12	Allungamento / Elongation C13	Contrazione / Reduction of area C14
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
126,60	50,80	1	20	331,0	--	511,0	33,4	61,6

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST					
HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
144,0 ; 149,0	KV	10x10x55 mm	-46	41	52	47	46,7

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020 ; ASME/ANSI B36.10M -2022		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. / Marking in acc. to B06	ANSI/MSS SP-25-2018	Vis. & Dim. D01	SATISFACTORY	Origine / Origin of Steel B16	ITALY EUROPEAN UNION

Note / Notes Z01-B03
MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION
Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D. Gaffuri		MFF

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001 ■ ISO 14001

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — **Nr** A03 2024-C_MFF-01283 — **Data / Dated** 23.05.2024 Z02

RACCORTUBI S.P.A. A06		**Ordine / PO**	5875 A07
Viale Lidice 38/40/42		**Item**	007 A07
10095 GRUGLIASCO TO IT		**DDT / Delivery note**	2024-3E301-0001259 A10
		Packing List	2024-3E401-0001269 A11
		Fattura / Invoice	2024-3E401-0001269 A12
		Ns. rif. / Our ref.	2024-3E201-0000845-0007 A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	22/35031	2,00	W/N 150 RF 12" 20 LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,190	0,250	1,050	0,003	0,011	0,140	0,050	0,010	0,015	0,150	0,003	0,001	0,010
PRODUCT ANALYSIS	0,185	0,238	1,063	0,002	0,008	0,149	0,058	0,013	0,018	0,135	0,005	0,002	0,008

	Al	CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,025	0,409	0,365	0,353	0,150	--
PRODUCT ANALYSIS	0,031	0,408	0,362	0,360	0,162	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta C10 Test specimen Sez/Sect mm2	Gauge L.mm	Forma C10 Shape 1=O - 2=□	°C C03	Snervamento>0,2% C11 Yield Strength>0,2% MPa	Snervamento>1,0% C11 Yield Strength>1,0% MPa	Rottura C12 Tensile MPa	Allungamento C13 Elongation %	Contrazione C14 Reduction of area %
126,60	50,80	1	20	345,0	--	502,0	33,1	63,3

DUREZZA / HARDNESS C30

HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
149,0 ; 154,0	KV	10x10x55 mm	-46	45	59	61	55,0

RESILIENZA / IMPACT TEST

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020 ; ASME/ANSI B36.10M -2022		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. B06 / Marking in acc. to	ANSI/MSS SP-25-2018	D01 Vis. & Dim.	SATISFACTORY	Origine B16 / Origin of Steel	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION
Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D. Gaffuri		MFF

CTCERT20240000003795.1.0001

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 4"x3" STD SEAMLESS

Heat num. or Pcs. marking: J4KB349 - Qty:5,00

Order: 1724000994 - 16.05.24 - Item n.: 23 - Our ref.: OCVEIT20240002207

Protocol: CTCERC20240005104 * CERTIFIED TRUE COPY * Issued 03-06-2024

ALLIED INTERNATIONAL fittings and flanges — TECTUBE RACCORDI S.p.A. — NRF RACCORDI FORGIATI

INSPECTION CERTIFICATE EN 10204 – 2004 ☒ 3.1 ☐ 3.2 ☐ COMPLIANCE

NUMBER 20500799
REVISION 00
DATE 09/02/20

ORDER: LS-0000013 JOB: V0000174 PROJECT

CLIENT ITEM	ITEM	Q.ty	DESCRIPTION	HEAT CODE	MARKING CODE	MATERIAL SPECIFICATION	MATERIAL	STEEL MAKER	CERT.N.	RAW MATERIAL
43	043	1.00	TEE 4"X 3" STD WPL6 ITEM:69	J4KB349	ITEM:69	ASTM A420 Ed.2016 , ASME SA420 Ed.2017	WPL6	NIPPON STEEL	BYYF2079	PIPE

CHEMICAL COMPOSITION ☒ BY LADLE ANALISYS * ☒ BY CHECK ANALYSIS ()**

HEAT	**	C	MN	SI	P	S	CR	NI	MO	CU	AL	V	NB	B	TI	N	CA	CE	CE CANADA
min.		0,0000	0,5000	0,1500	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,000	
max.		0,2000	1,3500	0,4000	0,0250	0,0200	0,3000	0,2000	0,1200	0,4000	0,0400	0,0500	0,0200	0,0005	0,0200	0,0120	0,0000	0,390	
J4KB349*	H	0,1100	1,2700	0,2500	0,0120	0,0030	0,1000	0,0200	0,0100	0,0200	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,350	0,240
J4KB349**	P	0,1200	1,2500	0,2400	0,0110	0,0020	0,0900	0,0200	0,0100	0,0200	0,0180	0,0010	0,0020	0,0001	0,0010	0,0010	0,0020	0,350	0,300

The chemical values and tensile properties are a true and correct copy of the certificate issued by the supplier of raw materials or by the laboratory which has determined them. CE=C+Mn/6+(Cr+V+Mo)/5+(Cu+Ni)/15 CE CANADA=C+Fz[Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5B]

MECHANICAL PROPERTIES ☐ ON RAW MATERIAL * ☒ ON FINISHED FITTINGS ** ☐ SUPPLEMENTARY REQ. ***

Tensile Test		Temp. °C:			Impact Test		Temp. °C: -50°C					
Test / Lot	Sense Direct.	Y.S. MPA	U.T.S. MPA	R.T. E%	Sense Direct.	Dim. Sample		Shear Area %	Lat.Exp. mm	Hardness HBW	Red. Area %	REMARKS
min.												STEEL IS FULLY KILLED, PRODUCED BY BASIC OXYGEN AND FINE GRAIN.
max.										Max. 200		MECHANICAL TEST CARRIED OUT ACCORDING TO A/SA370 AND A/SA420
273711	L	316	502	30,9	L	10x5	87 - 67 - 95			143-156	62,95	FITTINGS ACCORDING TO : ASME II PART A, ASME II PART D TABLEY1 / NACE MR 01.75 / ISO 15156 NACE MR 0103 / PED 97/23/EC PARA 4.3 and PED 2014/68/UE
												THE STEEL IS CALCIUM TREATED FOR MICROINCLUSION SHAPE CONTROL
												THE MATERIAL HAS NOT A RESIDUAL MAGNETISM GREATER THAN 20 GAUSS
												THE MATERIAL IS FREE FROM MERCURY AND RADIOACTIVE CONTAMINATION
												THE MATERIAL IS IN ACCORDANCE TO FRENCH LAW "Article 15 de l'arrete ministeriel du 24 Mars 1973 modifie"
												M.P.E. acc. to ASTM E709 carried out on crotch area with satisfactory results
												FITTINGS ACCORDING TO EN 10253-2 ED.2002 , GRADE P265NL TYPE A

ACTIVITIES CERTIFICATE RESULT

Material spec.: ASTM A420 Ed.2016 , ASME SA420 Ed.2017
Construction standard: ASME B16.9 Ed.2016 , ASME B16.25 Ed.17
Type of construction: SEAMLESS PRODUCED BY PIPE
Manufacturing method: COLD FORMED

Heat treatment: NORMALIZED AT 905°C (STILL AIR COOLING) 1min/mm min.

Work Inspector — 03/02/20 — DATE — SIGNATURE

Customer inspector — DATE — SIGNATURE

Third part Inspector — DATE — SIGNATURE

We hereby certify that the materials listed on this certificate have been manufactured and tested in compliance with the order requirements and above mentioned code and specification

☒ EU DIRECTIVE 97/23/EC ANNEXE I SECT. 4.3 & 7.5 and 2014/68/EU

ESS

Pcs. marking: 453686 - Qty:1,00

CHEMICAL COMPOSITION (*)

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu	V	Ti	Nb	Al	B	N	Sn	W	Zr	Sb	Co	Ta	Nb+Ta	Fe	As
H	0,13	1,2	0,16	0,01	0,003	0,13	0,11	0,02	0,1	0,066	0,002	0,002												
P																								

MECHANICAL PROPERTIES ☐ ON RAW MATERIAL ☑ ON PIECES IN FINISHED CONDITION

TEST Nr.	TENSION TEST										Hardness					
	Temp.	Direction	Y.S. 0.2%	U.T.S.	El. (2")	Temp.1	HOT Y.S.	Y.S. 0.2%	EL 5,65	Y.S./U.T.S.		Direction	Dimension	Temp.	Obtained Valu	
	°C	L/T	MPa	MPa	%	°C		MPa	%		HB Max	L/T	mm	°C	1	2
31.055	RT	L	309	536	38,0					0,58	158	T	10 X 7.5	-50	208	199

(*) H = Ladle Analysis, P = Product Analysis C.eq. LF = C + (Mn/6) + (Cr+Mo+V)/5 + (Ni+Cu)/15 C.E. (CSA) = C + F x [Mn/6 + Si/24 + Cu/15 + Ni/30 + (Cr+Mo+V+Nb)/

J Factor = (Si + Mn) x (P + Sn) x 104 Pcm = C + Si/30 + (Cr+Mn+Cu)/20 + Ni/60 + Mo/15 + V/10 + 5B PREN = Cr + 3.3Mo + 16N Unit of measure: %

REMARKS AND SUPPLEMENTARY INFORMATION

- SEAMLESS FITTINGS
- METHOD OF FABRICATION: COLD FORMING
- HEAT TREATMENT: NORMALIZING AT 920°C WITH COOLING IN STILL AIR; PERMANENCE 1 Hr./1" Wth (30' min. MINIMUM)
- VISUAL AND DIMENSIONAL INSPECTION ON FITTINGS: SATISFACTORY
- MT ON SIDE WALL AREA ON 100% OF THE FITTINGS ACCORDING TO ASTM E709 AND A275, ACCEPTANCE CRITERIA ASME VIII DIV.1 APP.6: SATISFACTORY
- THIS MATERIAL MEETS THE SPECIFICATION NACE MR0175 / ISO15156: 2015 AND NACE MR 0103 / ISO17945: 2016 WHEN USED IN THE SPECIFIC CONDITIONS DETAILED
- LA SOCIETE' O.M.R. SPA GARANTIT QUE LES PRODUITS OBJECT DU PRESENT CERTIFICAT RESPECTENT EN LEUR TOTALITE' LES PRESCRIPTIONS DE L'ARTICLE 15 D

S<=0.05 - P<=0.05% - Rm<=700 N/mm² - A%(L=5.65VSo)>=16% - Rm(A-2)>=10500 - Rp0.2/Rm<=0.9

- MATERIAL FULLY KILLED AND FINE GRAIN

MANUFACTURER AUTHORIZED INSPECTOR	PURCHASER AUTHORIZED INSPECTOR	OFFICIA
MULAZZI QC DEPT. *(The certificate is issued by computerized system and is valid without signature)* DATE 12/07/2022	DATE	DATE

Order: 1724000994 - 16.05.24 - Item n.: 25 - Our ref.: OCVEIT20240002207

Protocol: CTCERC20240005104 * CERTIFIED TRUE COPY
* Issued 03-06-2024

18	18	2	RED TEE BW 12"x10" SCH 20/20 ASTM A420 WPL6 SMLS	948456

CHEMICAL COMPOSITION ☒ BY LADLE ANALISYS * ☒

HEAT	Test	C	Mn	Si	P	S	Cr	Ni	Mo	Ti	Cu	V	Al	Nb	N	Sn
min.																
max.																
948456*	H	0,120	1,260	0,230	0,016	0,003	0,160	0,120	0,070	0,0000	0,150	0,030	0,000	0,016		
948456**	P	0,115	1,256	0,225	0,015	0,003	0,154	0,115	0,066	0,000	0,145	0,026	0,000	0,016		

The chimical values and tensile properties are a true and correct copy of the certificate issued by the supplier of raw materials or by the laboratory which has determined them.

MECHANICAL PROPERTIES ☐ ON RAW MATERIAL * ☒ ON FINISHED FITTINGS **

Tensile Test Temp. °C: +20 Impact Test Temp. °C: -50

	Senso Direct.	Y.S. MPA	U.T.S. MPA	A% mm	Senso Direct.	Dim. Sample	KCV (Joule)	Shear Area %	Lat.Exp. mm	Hardness HB	Red. Area %	REMARKS
min.							min.					Specification: ASTM A420-10a / A
max.							average			max. 197		Fittings comply with:
(B)948456**	T	439	541	32	T	10X5	143-240-245			154		Manufacturing meth cooling
												Heat Treatment: No
												Type of construction
												Fittings comply with
												NOUS CERTIFIONS
												les prescriptions de
												C<=0,25%, P<0,05
												R<=700 N/mm2, E<
												&A% (Lo=5,65VSo)
												A% (Lo=5,65VSo) r
												Trade Mark: TI

ACTIVITIES	
CERTIFICATE	
RESULT	
ACTIVITIES	
CERTIFICATE	
RESULT	

Work Inspector ALLIED INTERNATIONAL s.r.l. flanges and fittings C. CERVANI Quality Control

11/05/2012
DATE SIGNATURE

Customer Inspector

DATE SIGNATURE

Third pa

DATE

We hereby certify that the materials listed below have been manufactured in compliance with the order and mentioned rules.

Pcs. marking: 948456 - Qty:1,00

LESS

Order: 1724000994 - 16.05.24 - Item n.: 26 - Our ref.: OCVEIT20240002207

Protocol: CTCERC20240000510 4 * CERTIFIED TRUE COPY
* Issued 03-06-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724000994	123A90A	Q012400394

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 07.06.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 06/06/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00005261
Packing list	PLPLIS202400005235
Ns. Rif.	00002207
Vs. Rif.	1724000994 - 16.05.24

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00005261

06/06/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002207
Ordine N. P.O. number: 1724000994 - 16.05.24

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
4		3 CURVE 90° LR 8" SCH.20 SEAMLESS	W25A CTCERT202400003467_1.0001.TIF
5		2 CURVE 90° LR 10" SCH.20 SEAMLESS	X94J CTCERT202400003471_1.0001.TIF

INTERFIT®

GQ-0001T

N° de Cde Usine
Mill Ref / Werks-Nr 2400051 025 / 2400673

N° Certificat
Certificate Nr / Zeugnis Nr 24-01720

INTERFIT
B.P 10132 59602 MAUBEUGE FRANCE
Tél : 03.27.69.11.01

Raccords sans soudure à Souder
Seamless Butt Welding Fittings
Nahtlose Schweissformstücke

Client :
Consignee
Besteller

INSPECTION CERTIFICATE

EN 10204 3.1(2004)

Cde Client N° : LS-0000008 (WPL6)
Your Order Nr
Bestell-Nr

Spécifications :
Specifications :
Spezifikationen :

Acier et Normes
Steel and Standard
Werkstoff und Norm

Matière de départ / *Raw Material / Werkstoff*	Tubes sans soudure / Seamless Tube / Nahtlose Rohre Acier procédé Electrique / Electric Steel / Elektroofenstahl	INTERPIPE Acier calmé / Killed Steel / beruhigter Stahl

Etat de livraison
Delivery Condition / Lieferzustand

Marquage *Marking / Stempelung*	Sur pièces en creux low stress *Low stress hard stamp* *Kennzeichnung auf dem Fitting durch kerbfreie Einprägung*	If 8" STD WPL6 FRANCE 219 8 EN2 P265NL A420 W25A V = If

Poste N° *Item Nr* *Pos Nr*	Nombre *Number* *Stückzahl*	N° Certificat Matière Raw Material *Rohrzeugnis Nr*	Code *Marking* *Markierung*	Coulée N° *Heat Nr* *Schmelze*	Dimensions / *Sizes* / *Abmessungen*
025	84	0874-5	W25A	1240438	90° 3D 219.1 X 8.0 / LR 90° 8" STD WPL6 BELGY5P90881800000S CALR 90 8 STD WPL6

CARACTERISTIQUES CHIMIQUES - *CHEMICAL ANALYSIS - SCHMELZENANALYSE*

Product analysis

Coulée N° *Heat Nr* *Schmelze*		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Al	Sn	Ti	Nb	B
	mini		0.150	0.600								0.020				
	maxi	0.200	0.400	1.350	0.025	0.010	0.300	0.080	0.300	0.300	0.020			0.040	0.020	
1240438		0.10	0.21	1.24	0.016	0.001	0.11	0.011	0.10	0.10	0.001	0.029		0.001	0.001	

Carbone équivalent / *Carbon equivalent / Kohlenstoffäquivalent* (*Maxi : 0.41*)

CF : C + (Mn / 6) = 0,307 LF : C + (Mn / 6) + ((Cr + V + Mo) / 5) + ((Cu + Ni) / 15) = 0,344

CARACTERISTIQUES MECANIQUES
MECHANICAL PROPERTIES - MECHANISCHE EIGENSCHAFTEN

Sur Pièces
On Fittings
am Fittings

Essais de Traction / *Tensile Tests / Zugversuch* *Room temperature* *longitudinal direction*

Limite Elastique *Yield Point / Streckgrenze*	Résistance Rupture *Tensile strength / Zugfestigkeit*	Allongement *Elongation / Dehnung*	Dureté *Hardness test on fittings* *Härte* *HBW*
Re ≥ 265 MPa	415 ≤ Rm ≤ 570 MPa	2" A% ≥ 30	
347 MPa	493 MPa	2" 31,4 %	162 163 160 159

Résilience / Impact Test / Kerbschlagarbeit : *Sur pièces / On fittings / am Fittings*

Essai Test Versuch	Test 1	Test 2	Test 3	Moyenne : Unité Mean : Units Mittelwert : Einheit	Type : KV Specimen Muster	Température -50° Celsius or -58°F
Kvc 10x5	≥ 15	≥ 15	≥ 15	≥ 20		KV >= 40J (long.) at -40°C
Kvc 10x10	≥ 30	≥ 30	≥ 30	≥ 40		The results at -50°C fulfill the requirements at -40°C
24-00341	53,5	57,4	54,6	55,2 Joules	10 x 5 mm	Long / Long / Längs
24-00341	107	114,8	109,2	110,3 Joules	10 x 10 mm	Long / Long / Längs

Date : 14/05/2024

LE RESPONSABLE QUALITE

F. FRIART

WE CERTIFY THAT THE DELIVERED PRODUCTS WERE MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION OF THE ORDER.

INTERFIT GARANTIT QUE LE PRODUIT DU CERTIFICAT,RESPECTE LES PRESCRIPTIONS ART15 DU A.M 24/03/78 MODIFIE:C<=0.25,P<0.05,S<0.05,R<=700N/mm2 ,E<=0.9xR,A%(Lo=5.65VSo)min.16%long.R(A-2)>=10500, A%(Lo=5.65VSo)min.14% en transv.RxA>=10500

ISO 9001 / ISO 14001 / ISO 45001

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 4 - Our ref.: OCVEIT202400002207

Description: CURVE 90° LR 8" SCH.20 SEAMLESS

raccortubi Heat num. or Pcs. marking: W25A - Qty:3,00

Protocol: CTCERC202400005261 * CERTIFIED TRUE COPY
* Issued 06-06-2024

INTERFIT®

GQ-0001T

N° de Cde Usine
Mill Ref 2400051 027
Werks-Nr 2400344

N° Certificat
Certificate Nr
Zeugnis Nr 24-01358

INTERFIT
B.P 10132 59602 MAUBEUGE FRANCE
Tél : 03.27.69.11.01
Raccords sans soudure à Souder
Seamless Butt Welding Fittings
Nahtlose Schweissformstücke

Client :
Consignee
Besteller

COMMERCIALE TUBI ACCIAIO S.P.A.
VIALE LIDICE, 40
Italie

INSPECTION CERTIFICATE
EN 10204 3.1(2004)

Cde Client N° : LS-0000008 (WPL6)
Your Order Nr
Bestell-Nr

Spécifications :
Specifications :
Spezifikationen :

Acier et Normes
Steel and Standard
Werkstoff und Norm

Matière de départ
Raw Material / Werkstoff
Tubes sans soudure / Seamless Tube / Nahtlose Rohre
Acier procédé Electrique / Electric Steel / Elektroofenstahl
TENARIS DALMINE
Acier calmé / Killed Steel / beruhigter Stahl

Etat de livraison
Delivery Condition / Lieferzustand

Marquage
Marking / Stempelung
Sur pièces en creux low stress
Low stress hard stamp
Kennzeichnung auf dem Fitting durch kerbfreie Einprägung

If 10" STD WPL6 FRANCE 273 10 EN2 P265NL A420 X94Y

If = If

Poste N° *Item Nr Pos Nr*	Nombre *Number Stückzahl*	N° Certificat Matière Raw Material *Rohrzeugnis Nr*	Code *Marking Markierung*	Coulée N° *Heat Nr Schmelze*	Dimensions / *Sizes* / *Abmessungen*
027	293	01-22-14607	X94Y	925678	90° 3D 273.0 X 10.0 / LR 90° 10" STD WPL6 BELGY5P91092700000S CALR 9010° STD WPL6

CARACTERISTIQUES CHIMIQUES - *CHEMICAL ANALYSIS - SCHMELZENANALYSE*

Product analysis

Coulée N° *Heat Nr Schmelze*		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Al	Sn	Ti	Nb	B
	mini		0.150	0.600								0.020				
	maxi	0.200	0.400	1.350	0.025	0.010	0.300	0.080	0.300	0.300	0.020			0.040	0.020	
925678		0.08	0.20	1.01	0.011	0.003	0.13	0.06	0.15	0.19	0.001	0.024		0.001	0.001	

Carbone équivalent / *Carbon equivalent / Kohlenstoffäquivalent* (*Maxi : 0.41*)

CF : C + (Mn / 6) = 0,248

LF : C + (Mn / 6) + ((Cr + V + Mo) / 5) + ((Cu + Ni) / 15) = 0,309

CARACTERISTIQUES MECANIQUES
MECHANICAL PROPERTIES - MECHANISCHE EIGENSCHAFTEN

Sur Pièces
On Fittings
am Fittings

Essais de Traction / *Tensile Tests / Zugversuch* *Room temperature* *longitudinal direction*

Limite Elastique *Yield Point / Streckgrenze*	Résistance Rupture *Tensile strength / Zugfestigkeit*	Allongement *Elongation / Dehnung*	Dureté *Hardness test on fittings Härte HBW*
Re ≥ 265 MPa	415 ≤ Rm ≤ 570 MPa	2" A% ≥ 30	
327 MPa	470 MPa	2" 38,9 %	147 148 150 150

Résilience / Impact Test / Kerbschlagarbeit : *Sur pièces / On fittings / am Fittings*

Essai Test Versuch Kvc 10x10	Test 1	Test 2	Test 3	Moyenne : Unité Mean : Units Mittelwert : Einheit	Type : KV Specimen Muster	Température -50° Celsius or -58°F KV >= 40J (long.) at -40°C The results at -50°C fulfill the requirements at -40°C
	≥ 30	≥ 30	≥ 30	≥ 40		
23-00055	230,9	230,5	237,1	232,8	10 x 10 mm	Long / Long / Längs

Date : 05/04/2024

LE RESPONSABLE QUALITE

F. FRIART

WE CERTIFY THAT THE DELIVERED PRODUCTS WERE MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION OF THE ORDER.

INTERFIT GARANTIT QUE LE PRODUIT DU CERTIFICAT,RESPECTE LES PRESCRIPTIONS ART15 DU A.M 24/03/78 MODIFIE:C<=0.25,P<0,05,S<0.05,R<=700N/mm2 ,E<=0.9xR,A%(Lo=5.65VSo)min.16%long.R(A-2)>=10500, A%(Lo=5.65VSo)min.14% en transv.RxA>=10500

ISO 9001 / ISO 14001 / ISO 45001

Customer: ROSETTI MARINO S.p.A.

Order: 1724000994 - 16.05.24 - Item n.: 5 - Our ref.: OCVEIT202400002207

Description: CURVE 90° LR 10" SCH.20 SEAMLESS

raccortubi Heat num. or Pcs. marking: X94J - Qty:2,00

Protocol: CTCERC202400005261 * CERTIFIED TRUE COPY
* Issued 06-06-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724000994	123A90A	Q012400459

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 24/06/2024

Sonia Emiliani

☒ REVIEW

☐ WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 21/06/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00005873
Packing list	PLPLIS202400005840
Ns. Rif.	00002207
Vs. Rif.	1724000994 - 16.05.24

DISTINTI SALUTI
Best Regards
raccortubi

raccortubi

00005873

21/06/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002207
Ordine N. P.O. number: 1724000994 - 16.05.24

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
17	5	Weldolet MSS SP-97 BW FRG ASTM/ASME A/SA350 Gr.LF2 8"x3" thk 6,35/5,49mm	280285 CTCERT202400004368_1.0001.TIF
18	10	Weldolet MSS SP-97 BW FRG ASTM/ASME A/SA350 Gr.LF2 10"x3" thk 6,35/5,49mm	280285 CTCERT202400004368_1.0001.TIF

Customer: ROSETTI MARINO S.p.A.

Description: Weldolet MSS SP-97 BW FRG ASTM/ASME A/SA350 Gr.LF2 8"x3" Ithk 6,35/5,49mm

Heat num. or Pcs. marking: 280285 - Qty:5,00

Order: 1724000994 - 16.05.24 - Item n.: 17 - Our ref.: OCVEIT20240002207

Protocol: CTCERC20240000005873 * CERTIFIED TRUE COPY * Issued 21-06-2024

CERTIFICATO DI COLLAUDO / TEST CERTIFICATE IN ACC. TO EN 10204 3.1 - 2004

Cliente/Customer: RACCORTUBI SPA
Ordine cliente/Customer order n°: 5877 del 16/05/24
DDT/Delivery note/Packing list: 2024/DDT/002445

Certificate N°: 002445
Omsa Job: 2024/ODV/008356
Data/Date: 14/06/2024

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
17	5.0	WELDBR. STD/20 3"x8" BW A350 LF2 CL.1	ASTM/ASME SA/A350LF2 CL1	280285	280285	ACCIAIERIE BERTOLI SAFAU SPA	356304/1	Italia

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,1710	0,9700	0,2100	0,0090	0,0030	0,1200	0,1900	0,0300	0,0023	0,0230	0,0040	0,1700	0,0020	0,0058	0,0000	0,0090	0,0000	0,0000	0,0120	0,0000	0,4000	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending Test	Flatting Test	Hydraulic Test	1^HBW Hardness test	2^HBW Hardness test	1^Impact test J/cm2	2^Impact test J/cm2	3^Impact test J/cm2	Impact test temp °C	Heat treatment
517,00	337,00	32,30	71,40	0,00	0,00	0,00	152,00	157,00	85,00	72,00	76,00	-46,00	Normalized at 900°C - Cooled in still air

RACCORDI SECONDO / FITTINGS IN ACC. TO

Accoding with ASME B31.1&B31.3&B16.25&MSS SP97-19, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - UNI EN ISO 148-1-2016, Carbon steel fully killed & fine grained practice

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
18	10.0	WELDBR. STD/20 3"x10" BW LF2 CL.1	ASTM/ASME SA/A350LF2 CL1	280285	280285	ACCIAIERIE BERTOLI SAFAU SPA	356304/1	Italia

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,1710	0,9700	0,2100	0,0090	0,0030	0,1200	0,1900	0,0300	0,0023	0,0230	0,0040	0,1700	0,0020	0,0058	0,0000	0,0090	0,0000	0,0000	0,0120	0,0000	0,4000	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending Test	Flatting Test	Hydraulic Test	1^HBW Hardness test	2^HBW Hardness test	1^Impact test J/cm2	2^Impact test J/cm2	3^Impact test J/cm2	Impact test temp °C	Heat treatment
517,00	337,00	32,30	71,40	0,00	0,00	0,00	152,00	157,00	85,00	72,00	76,00	-46,00	Normalized at 900°C - Cooled in still air

RACCORDI SECONDO / FITTINGS IN ACC. TO

Accoding with ASME B31.1&B31.3&B16.25&MSS SP97-19, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - UNI EN ISO 148-1-2016, Carbon steel fully killed & fine grained practice

The values of chemical analysis are a true and correct copy of the steel mill test certificate.
The mechanical tests are the correct records of the certificate issued from the company that has executed the last transformation of the material.
We declare that the certified material complies with the above standards and to the client's order requirements.

ANNUAL BOOK OF ASTM STANDARDS - 2024
MATERIAL DUAL CERTIFIED ASTM/ASME SEC. II PART A ED. 2023
MATERIAL MANUFACTURER APPROVED BY LRQA CERT. NR. 003001 PED 2014/68/EU ANNEX I CHAPTER 4.3

ENTE COLLAUDO / TPI INSPECTOR

C. QUALITA' / QUALITY CONTROL
O.M.S.A. SRL
Barbara Orlandi

Barbara Orlandi

Customer: ROSETTI MARINO S.p.A.

Description: Weldolet MSS SP-97 BW FRG ASTM/ASME A/SA350 Gr.LF2 10"x3" thk 6,35/5,49mm

Heat num. or Pcs. marking: 280285 - Qty:10,00

Order: 1724000994 - 16.05.24 - Item n.: 18 - Our ref.: OCVEIT202400002207

Protocol: CTCERC202400005873 * CERTIFIED TRUE COPY * Issued 21-06-2024

CERTIFICATO DI COLLAUDO / TEST CERTIFICATE IN ACC. TO EN 10204 3.1 - 2004

Cliente/Customer: RACCORTUBI SPA
Ordine cliente/Customer order n°: 5877 del 16/05/24
DDT/Delivery note/Packing list: 2024/DDT/002445

Certificate N°: 002445
Omsa Job: 2024/ODV/008356
Data/Date: 14/06/2024

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
17	5.0	WELDBR. STD/20 3"x8" BW A350 LF2 CL.1	ASTM/ASME SA/A350LF2 CL1	280285	280285	ACCIAIERIE BERTOLI SAFAU SPA	356304/1	Italia

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,1710	0,9700	0,2100	0,0090	0,0030	0,1200	0,1900	0,0300	0,0023	0,0230	0,0040	0,1700	0,0020	0,0058	0,0000	0,0090	0,0000	0,0000	0,0120	0,0000	0,4000	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending Test	Flatting Test	Hydraulic Test	1^HBW Hardness test	2^HBW Hardness test	1^Impact test J/cm2	2^Impact test J/cm2	3^Impact test J/cm2	Impact test temp °C	Heat treatment
517,00	337,00	32,30	71,40	0,00	0,00	0,00	152,00	157,00	85,00	72,00	76,00	-46,00	Normalized at 900°C - Cooled in still air

RACCORDI SECONDO / FITTINGS IN ACC. TO

Accoding with ASME B31.1&B31.3&B16.25&MSS SP97-19, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - UNI EN ISO 148-1-2016, Carbon steel fully killed & fine grained practice

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
18	10.0	WELDBR. STD/20 3"x10" BW LF2 CL.1	ASTM/ASME SA/A350LF2 CL1	280285	280285	ACCIAIERIE BERTOLI SAFAU SPA	356304/1	Italia

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,1710	0,9700	0,2100	0,0090	0,0030	0,1200	0,1900	0,0300	0,0023	0,0230	0,0040	0,1700	0,0020	0,0058	0,0000	0,0090	0,0000	0,0000	0,0120	0,0000	0,4000	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending Test	Flatting Test	Hydraulic Test	1^HBW Hardness test	2^HBW Hardness test	1^Impact test J/cm2	2^Impact test J/cm2	3^Impact test J/cm2	Impact test temp °C	Heat treatment
517,00	337,00	32,30	71,40	0,00	0,00	0,00	152,00	157,00	85,00	72,00	76,00	-46,00	Normalized at 900°C - Cooled in still air

RACCORDI SECONDO / FITTINGS IN ACC. TO

Accoding with ASME B31.1&B31.3&B16.25&MSS SP97-19, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - UNI EN ISO 148-1-2016, Carbon steel fully killed & fine grained practice

The values of chemical analysis are a true and correct copy of the steel mill test certificate.
The mechanical tests are the correct records of the certificate issued from the company that has executed the last transformation of the material.
We declare that the certified material complies with the above standards and to the client's order requirements.

ANNUAL BOOK OF ASTM STANDARDS - 2024
MATERIAL DUAL CERTIFIED ASTM/ASME SEC. II PART A ED. 2023
MATERIAL MANUFACTURER APPROVED BY LRQA CERT. NR. 003001 PED 2014/68/EU ANNEX I CHAPTER 4.3

ENTE COLLAUDO / TPI INSPECTOR

C. QUALITA' / QUALITY CONTROL
O.M.S.A. SRL
Barbara Orlandi

Barbara Orlandi

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
CTA GROUP	1724000995	123A90A	Q012400390

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **06.06.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

NORMALIZED **NORMALIZZATI**	**See note nr.1** **Vedi nota nr.1**		**BAR** **GRE**
Standard or Specification / Norme o specifica: **See note nr.2** **Vedi nota nr.2**		Steel Grade / Grado dell'Acciaio: **STEEL GR 6 ASTM A 333 AND ASME SA 333** **ACC. GR 6 ASTM A 333 E ASME SA 333**	Ends **BEV** **SMU**
Dimensions / Dimensioni: **ø12.750" O.D. x .330" W.T.** **ø323.90mm O.D. x 8.38mm W.T.**	Schedule / Schedula: . .	Length / Lunghezza: **32.808 ft ÷ 38.714 ft** **10000 mm ÷ 11800 mm**	Quantity / Quantità: **28Pcs/Pz** **1042'08" ft** **46376,3 lb** **317.81 mt** **21036 kg**	Nomi **43.8** **65.2**

DELIVERY NOTES / AVVISI DI SPEDIZIONE

Delivery Notes Avvisi di spedizione	Delivery No Avvisi di sped
Job Number: 0031365650 / 000030 Shipping note: 0105238271 - 05/09/2023 Address: VIALE LIDICE, 40	Town: 10095 GRUGLIASCO. Country: Italy

TENSILE TEST / PROVA DI TRAZIONE

Heat N° Colata N°	Sample N° Prova N°	Lot N° Lotto N°	Specimen condition Condizioni della provetta				Specimen dimensions Dimensioni della provetta		Test temp Temp. di prova	Y.S. OffSet 0.2% Min: 240.00 Max: --	Y.S. EUL 0.5% Min: 240.00 Max: --	U.T.S. Req. Min: 415.00 Max: --	Y.S./U.T.S Req. Max. 0.85	Elongation / Allungamen		
			Ls	Sc	Type Tipo	Ori	Size Dimensioni	Area Area						Lo	Min.	Min.
							mm	**mm2**	**°C**	**MPa**	**MPa**	**MPa**		**cal.**	**mm**	**%**
934090	R0402	4	B	AM	Ss	L	37.98 x 8.62	328.20	+20	326.00	325.00	471.00	0.69	2"	50.0	30.0%
934090	R0403/C	4	B	AM	Ss	L	37.95 x 8.55	325.30	+20	328.00	327.00	467.00	0.70	2"	50.0	30.0%

AM: As manufactured / Come fabbricato	Ls: Location of sample / Ubicazione provetta	Ori: Orientation / Orientamento
B: Body / Corpo	Max: Maximum / Massimo	Req. Max: Required maximum / Massimo richiesto
L: Longitudinal / Longitudinale	Min: Minimum / Minimo	Req: Required / Richiesto
Lo: Initial length / Lunghezza iniziale	Obt: Obtained / Ottenuto	Sc: Specimen condition / Condizioni Provetta

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

Questo certificato è emesso da un sistema computerizzato ed è valido con firma e
Il possessore dell'originale, qualora rilasci copia, deve attestarne a suo nome la c
Qualunque alterazione e/o falsificazione sarà perseguita a norma di legge.

NORMALIZED **NORMALIZZATI**	**See note nr.1** **Vedi nota nr.1**		**BAR** **GRE**
Standard or Specification / Norme o specifica: **See note nr.2** **Vedi nota nr.2**		Steel Grade / Grado dell'Acciaio: **STEEL GR 6 ASTM A 333 AND ASME SA 333** **ACC. GR 6 ASTM A 333 E ASME SA 333**	Ends **BEV** **SMU**
Dimensions / Dimensioni: **ø12.750" O.D. x .330" W.T.** **ø323.90mm O.D. x 8.38mm W.T.**	Schedule / Schedula: - -	Length / Lunghezza: **32.808 ft ÷ 38.714 ft** **10000 mm ÷ 11800 mm**	Quantity / Quantità: **28Pcs/Pz** **1042'08" ft** **46376,3 lb** **317.81 mt** **21036 kg**	Nomi **43.8** **65.2**

CHEMICAL COMPOSITION / COMPOSIZIONE CHIMICA

				Composition % / Composizione %																
				X 100									X 1000						X 10000		
				C	Mn	Si	Ni	Cr	Mo	Cu	Ce LF	F1	P	S	Al	Ti	Nb	V	N	B	Ca
			H Max	**18**	**130**	**30**	**40**	**30**	**12**	**40**	**42**	**60**	**25**	**10**	**40**	**20**	**20**	**50**	**120**	**5**	**60**
			Min	–	–	**10**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Heat N° Colata N°	Sample N° Prova N°	Lot N° Lotto N°	P Max	**18**	**130**	**30**	**40**	**30**	**12**	**40**	**42**	**60**	**25**	**10**	**40**	**20**	**20**	**50**	**120**	**5**	**60**
			Min	–	–	**10**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
934090			H	10	111	19	15	11	8	20	35	40.2	11	3	26	1	1	10	91	1	16
934090	R0402	4	P	11	107	18	15	11	8	20	35	40.2	10	2	26	1	1	10	105	1	17
934090	R0403/C	4	P	11	109	18	16	11	8	21	36	41.3	10	2	26	1	2	10	103	1	15

Ce LF: C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
F1: (Nb+V +Ti+Cr+Cu+Mo)

H: Heat / Colata
Max: Maximum / Massimo

Min: Minimum / Minimo
P: Product / Prodotto

THROUGH WALL HARDNESS / DUREZZA ATTRAVERSO LO SPESSORI

Required values Valori richiesti			Individuals / Individuali Min: –	 Max: 200.0	 Var: –	Average / Media Min: –	 Max: –	 Var: –	Hardness type/Tipo de dureza:brinell							
Heat N° Colata N°	Sample N° Prova N°	Lot N° Lotto N°	Specimen condition Ls		Sc		Quad.	Scale Scala	OD 1	2	Dist. (mm)	Avg.	1	
934090	R0402	4	B		AM		1	HBW	144.0	142.0	- 2.00	143.0	144.0	

AM: As manufactured / Come fabbricato
Avg: Average / Media

diametro esterno
ID: Internal Diameter / Diametro interno

Min: Minimum / Minimo
OD: Outside Diameter / Diametro esterno

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NORMALIZED NORMALIZZATI	See note nr.1 Vedi nota nr.1	BAR GRE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends
See note nr.2 Vedi nota nr.2	STEEL GR 6 ASTM A 333 AND ASME SA 333 ACC. GR 6 ASTM A 333 E ASME SA 333	BEV SMU

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 28Pcs/Pz	Nom
ø12.750" O.D. x .330" W.T.	.	32.808 ft ÷ 38.714 ft	1042'08" ft 46376,3 lb	43.8
ø323.90mm O.D. x 8.38mm W.T.	.	10000 mm ÷ 11800 mm	317.81 mt 21036 kg	65.2

THROUGH WALL HARDNESS / DUREZZA ATTRAVERSO LO SPESSOR

B: Body / Corpo
Dist: Distance from outer diameter / Distanza dal
Ls: Location of sample / Ubicazione provetta
Max: Maximum / Massimo
Quad: Quadrant / Quadrante
Sc: Specimen condition / Condizioni Provetta

IMPACT TEST / PROVA DI RESILIENZA

Type/Tipo: **CVN8** | Orientation/Direzione: **L** | Unit / Unità: **JOULE**
Position/Posizione: | Temp: **- 45** Unit/Unità: **°C** | Ind.Min.Req: **9** Req.Min.Avg: **12**

Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Lot N° / Lotto N°	Ls	Sc	Size / Dimensioni mm	Results / Risultato 1	2	3	Avg.
934090	R0402	outside	4	B	AM	10 x 6.70	210.0	218.0	180.0	203.0

AM: As manufactured / Come fabbricato
Avg: Average / Media
B: Body / Corpo
Ind. Min. Req: Individual Minimum Required / Minimo singolo richiesto
L: Longitudinal / Longitudinale
Ls: Location of sample / Ubicazione provetta
Req. Min. Avg: Required minimum average / Minima media richiesta
Sc
Te

Type/Tipo: **KV2** | Orientation/Direzione: **T** | Unit / Unità: **JOULE**
Position/Posizione: | Temp: **- 50** Unit/Unità: **°C** | Ind.Min.Req: **24** Req.Min.Avg: **31**

Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Lot N° / Lotto N°	Ls	Sc	Size / Dimensioni mm	Results / Risultato 1	2	3	Avg.
934090	R0402	outside	4	B	AM	10 x 7.50	158.0	160.0	148.0	155.0

AM: As manufactured / Come fabbricato
Avg: Average / Media
B: Body / Corpo
Ind. Min. Req: Individual Minimum Required / Minimo singolo richiesto
Ls: Location of sample / Ubicazione provetta
Req. Min. Avg: Required minimum average / Minima media richiesta
Sc: Specimen condition / Condizioni Provetta
T:
Te

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NORMALIZED NORMALIZZATI	See note nr.1 Vedi nota nr.1		BAR GRE
Standard or Specification / Norme o specifica: See note nr.2 Vedi nota nr.2		Steel Grade / Grado dell'Acciaio: STEEL GR 6 ASTM A 333 AND ASME SA 333 ACC. GR 6 ASTM A 333 E ASME SA 333	Ends BEV SMU
Dimensions / Dimensioni: ø12.750" O.D. x .330" W.T. ø323.90mm O.D. x 8.38mm W.T.	Schedule / Schedula: . .	Length / Lunghezza: 32.808 ft ÷ 38.714 ft 10000 mm ÷ 11800 mm	Quantity / Quantità: 28Pcs/Pz 1042'08" ft 46376,3 lb 317.81 mt 21036 kg	Nom 43.8 65.2

FLATTENING TEST / PROVA DI SCHIACCIAMENTO

Standard / Norma:

Heat N° Colata N°	Lot N° Lotto N°	Sample N° Prova N°	Zone Zona	Sc	Test Frequency Frequenza prova	Result Esito
934090	4	R0398	E1	AM	5% of the lot	Good /Buono
934090	4	R0399/C	E1	AM	5% of the lot	Good /Buono

Standard / Norma:

Heat N° Colata N°	Lot N° Lotto N°	Sample N° Prova N°	Zone Zona	Sc	Test Frequency Frequenza prova
934090	4	R0400	E1	AM	5% of the lot
934090	4	R0401/C	E1	AM	5% of the lot

AM: As manufactured / Come fabbricato E1 / E2: Ends of Sampling / Estremità della provetta Sc

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NORMALIZED NORMALIZZATI	See note nr.1 Vedi nota nr.1		BAR GRE
Standard or Specification / Norme o specifica: See note nr.2 Vedi nota nr.2		Steel Grade / Grado dell'Acciaio: STEEL GR 6 ASTM A 333 AND ASME SA 333 ACC. GR 6 ASTM A 333 E ASME SA 333	Ends BEV SMU
Dimensions / Dimensioni: ø12.750" O.D. x .330" W.T. ø323.90mm O.D. x 8.38mm W.T.	Schedule / Schedula: . .	Length / Lunghezza: 32.808 ft ÷ 38.714 ft 10000 mm ÷ 11800 mm	Quantity / Quantità: 28Pcs/Pz 1042'08" ft 46376,3 lb 317.81 mt 21036 kg	Nom 43.8 65.2

HYDROSTATIC TEST / PROVA IDRAULICA

Pressure / Pressione		Time / Tempo	Results / Risultato
Unit / Unità.	Value / Valore	Seconds / Secondi	
MPa	8	5	Satisfactory / Soddisfacente

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

STANDARD EDITIONS
EDIZIONI NORME

Standard:ASTM A 333/333M Year:2018	Norma:ASTM A 333/333M Anno:2018
Standard:ASME SA333M Year:2019	Norma:ASME SA333M Anno:2019
Standard:ANSI/NACE MR0175-2021/ISO 15156-1:2020	Norma:ANSI/NACE MR0175-2021/ISO 15156-1:2020
Standard:ANSI/NACE MR0103-2015 (R2023) ISO 17945 Year:2015	Norma:ANSI/NACE MR0103-2015 (R2023) ISO 17945 Anno:20

PRODUCT DESCRIPTION NOTES
NOTE DI DESCRIZIONE DEL PRODOTTO

Note 1 is the full description of the 'Product type' SEAMLESS HOT FINISHED TUBES FOR LOW TEMPERATURE SERVICES (WITH SUPPLEMENTARY REQUIREMENTS)	La nota 1 è la descrizione completa del 'Tipo prodotto' TUBI S.S. DI QUALITA' FINITI A CALDO PER IMPIEGHI A BASS SUPPLEMENTARI)
Note 2 is the full description of the 'Standard or specification' NORM ASTM A 333 M,ASME SA333M, MPD-02-PS-GS R.1, NACE MR0175/ISO15156/MR0103, PED & TEMPL. CTA-MPD-6 REV.3	La nota 2 è la descrizione completa delle 'Norme o speci NORMA ASTM A 333 M,ASME SA333M, MPD-02-PS-GS R.1, NACE M CTA-MPD-6 REV.3

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NORMALIZZATI		**Vedi nota nr.1**		
Standard or Specification / Norme o specifica: **See note nr.2** **Vedi nota nr.2**			Steel Grade / Grado dell'Acciaio: **STEEL GR 6 ASTM A 333 AND ASME SA 333** **ACC. GR 6 ASTM A 333 E ASME SA 333**	
Dimensions / Dimensioni: **ø12.750" O.D. x .330" W.T.** **ø323.90mm O.D. x 8.38mm W.T.**	Schedule / Schedula: . .	Length / Lunghezza: **32.808 ft ÷ 38.714 ft** **10000 mm ÷ 11800 mm**	Quantity / Quantità: **28Pcs/Pz** **1042'08" ft** **46376,3 lb** **317.81 mt** **21036 kg**	

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

Supplementary Information Informazioni supplementari	
La Societe' DALMINE garantit que tous les produits, objet du Certificat susdit, respectent en leur totalite' les Specifications de l'Article 15 de l'Arrete Ministeriel du 24 mars 1978 modifiè: C max 0.25% P max 0.05% S max 0.05% Rm (N/mm2) max 700 A(Lo=5.65VSo) min 16% long Rm (A-2) min 10500 E max 0.9 A(Lo=5.65VSo) min 14% trans RA min 10500	La Societe' DALMINE garantit que tous les produits, obj leur totalite' les Specifications de l'Article 15 de l'Arrete Minister C max 0.25% P max 0.05% S max 0.05% Rm (N/mm2) ma (A-2) min 10500 E max 0.9 A(Lo=5.65VSo) min 14% trans RA min 10500

Supplementary Information Informazioni supplementari	
Country of melt ITALY Continuous casting and Fully killed	Paese di colaggio acciaio ITALIA Colaggio continuo ed acciaio di tipo calmato

Supplementary Information Informazioni supplementari	
TENARIS OPERATES A QUALITY MANAGEMENT SYSTEM ASSESSED AND CERTIFIED BY T.U.V. SUD INDUSTRIE SERVICE GMBH SUPPORTING THE REQUIREMENTS OF ANNEX I PAR. 4.3 OF PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU. CERTIFICATION no. DGR-0036-QS-W 200/2003/MUC-02(NOTIFIED BODY 0036.) MATERIAL ACCORDING TO ASME II PART. D TAB. Y1 AFTER INSPECTION OPERATION, THE MATERIAL HAS NOT A RESIDUAL MAGNETISM GREATER THAN 020 GAUSS HARDNESS HRC 22 MAX, ACCORDING TO NACE MR0175/ISO 15156 HARDNESS HBW 200 MAX, ACCORDING TO NACE MR0103/ISO 17945 ALL PIPES HAVE BEEN TESTED BY ELECTROMAGNETIC TEST	TENARIS GESTISCE UN SISTEMA DI GESTIONE DELLA QUALITA V CERTIFICATO DAL T.U.V. SUD INDUSTRIE SERVICE GMBH A SOS REQUISITI DELL'ALLEGATO I PAR. 4.3 DELLA DIRETTIVA APPA PRESSIONE 2014/68/UE. CERTIFICAZIONE n. DGR-0036-QS-W 200/2003/MUC. (ORGANISMO NOTIFICATO 0036.) 0036.CERTIFICAZIONE n. DGR-0036-QS-W 200/2003 / MUC MATERIALE IN ACCORDO ALLA SPEC. ASME II PART. D TAB. Y1 DOPO LE OPERAZIONI DI CONTROLLO, IL MATERIALE NON PRESE MAGNETISMO RESIDUO SUPERIORE A 020 GAUSS

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NORMALIZED **NORMALIZZATI**		**See note nr.1** **Vedi nota nr.1**		**BAR** **GRE**
Standard or Specification / Norme o specifica: **See note nr.2** **Vedi nota nr.2**			Steel Grade / Grado dell'Acciaio: **STEEL GR 6 ASTM A 333 AND ASME SA 333** **ACC. GR 6 ASTM A 333 E ASME SA 333**	Ends **BEV** **SMU**
Dimensions / Dimensioni: **ø12.750" O.D. x .330" W.T.** **ø323.90mm O.D. x 8.38mm W.T.**	Schedule / Schedula: . .	Length / Lunghezza: **32.808 ft ÷ 38.714 ft** **10000 mm ÷ 11800 mm**	Quantity / Quantità: **28Pcs/Pz** **1042'08" ft** **46376,3 lb** **317.81 mt** **21036 kg**	Nomi **43.8** **65.2**

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

Supplementary Information Informazioni supplementari	
(TRANSVERSAL/LONGITUDINAL INSIDE/OUTSIDE NOTCH 10,0 %)	DUREZZA HRC 22 MAX, IN ACCORDO ALLA SPEC. NACE MR0175/
WITH SATISFACTORY RESULT ACCORDING TO SPEC. E 570	DUREZZA HBW 200 MAX, IN ACCORDO ALLA SPEC. NACE MR010
ALL PIPES HAVE BEEN NORMALIZED AT 920°C FOR 10 MINS. AND COOLED IN	I TUBI SONO STATI SOTTOPOSTI AL CONTROLLO ELETTROMAGNETI
STILL AIR	(TRASVERSALI/LONGIT. INTERNI/ESTERNI 10,0 %)
EMI FULL LENGTH	CON ESITO SODDISFACENTE IN ACCORDO ALLA SPEC. E 570
MATERIAL ACCORDING TO ASME B 36.10	I TUBI SONO STATI NORMALIZZATI A 920°C PER 10 MIN. E RAF
STEEL IS CALCIUM TREATED FOR MICROINCLUSION SHAPE CONTROL	ARIA CALMA
.	EMI SU TUTTA LA LUNGHEZZA
.	MATERIALE IN ACCORDO ALLA ASME B 36.10
.	ACCIAIO TRATTATO AL CALCIO PER CONTROLLO MICROINCLUSIONI
SEAMLESS HOT FINISHED PIPES	TUBI SENZA SALDATURA FINITI A CALDO
VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT	IL CONTROLLO VISIVO E DIMENSIONALE HA DATO ESITO SODDISF
STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE	L'ACCIAIO E' DI TIPO CALMATO, A GRANO FINE, PRODOTTO AL
THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER.	IL MATERIALE FORNITO E' IN ACCORDO AI REQUISITI DELL'ORD
MANUFACTURED BY TENARIS DALMINE	FABBRICATO DA TENARIS DALMINE
NO WELD REPAIR, MERCURY AND RADIATION FREE	NON RIPARATO MEDIANTE SALDATURA, ESENTE DA MERCURIO E RA
AS PER STANDARD, PIPES CAN BE REPAIRED; MANUFACTURER SHOULD DECIDE TO GRIND THE	COME DA PROCEDURA STANDARD, I TUBI POSSONO ESSERE RIPARA
SURFACE OF THE PIPES WHEN, DURING FINAL VISUAL INSPECTION, SOME IMPERFECTIONS	PROCEDERE ALLA RETTIFICA DELLA LORO SUPERFICIE QUANDO DU
ARE DETECTED. THE RESULTED SURFACE AREAS, AFTER GRINDING, HAS DIFFERENT	FINALE VENGONO RILEVATE DELLE IMPERFEZIONI. DOPO LA RETT
COLORATION COMPARED WITH USUAL ONE AS MANUFACTURED. THE RESIDUAL WALL THICKNESS	INTERESSATE PRESENTANO UNA COLORAZIONE DIVERSA RISPETTO
AFTER GRINDING HAS BEEN CHECKED RESULTING IN TOLERANCE WITH STANDARD.	SPESSORE RESIDUO DELLE PARETI RIENTRA NELLA SOGLIA DI TO
Tenaris IT identification number for MTC: 59\mPV:\	Numero Identificativo Tenaris IT per MTC: 59\mPV:\

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NORMALIZZATI		**See note nr.1** **Vedi nota nr.1**		**BA** **GR**
Standard or Specification / Norme o specifica: **See note nr.2** **Vedi nota nr.2**			Steel Grade / Grado dell'Acciaio: **STEEL GR 6 ASTM A 333 AND ASME SA 333** **ACC. GR 6 ASTM A 333 E ASME SA 333**	End **BE** **SM**
Dimensions / Dimensioni: **ø12.750" O.D. x .330" W.T.** **ø323.90mm O.D. x 8.38mm W.T.**	Schedule / Schedula: . .	Length / Lunghezza: **32.808 ft ÷ 38.714 ft** **10000 mm ÷ 11800 mm**	Quantity / Quantità: **28Pcs/Pz** **1042'08" ft** **46376,3 lb** **317.81 mt** **21036 kg**	Nor **43.** **65.**

MARKING / MARCATURA

Marking Marcatura	
STENCILING _T ASTM/ASME A/SA 333M 6 HOT FINISHED SEAMLESS 323,90 x 8,38 SCH .30 LT-50C HEAT: _COLATA MT _MT KG _KG NR. _NR . LEGEND _T = TENARIS Logo _COLATA = Heat Number _MT = Pipe/Tube Length in meters _KG = Pipe/Tube Weight in kilograms _NR = Pipe/Tube identifier	VERNICIATURA _T ASTM/ASME A/SA 333M 6 HOT FINISHED SEAMLESS 323,9 HEAT: _COLATA MT _MT KG _KG NR. _NR . LEGENDA _T = Logo TENARIS _COLATA = Numero di colata _MT = Lunghezza del tubo in metri _KG = Peso del tubo in chilogrammi _NR = Identificativo numerico del tubo
PUNCHING HEAT: _COLATA . LEGEND _COLATA = Heat Number	PUNZONATURA HEAT: _COLATA . LEGENDA _COLATA = Numero di colata

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NORMALIZED NORMALIZZATI		See note nr.1 Vedi nota nr.1		BARE GRE
Standard or Specification / Norme o specifica: See note nr.2 Vedi nota nr.2			Steel Grade / Grado dell'Acciaio: STEEL GR 6 ASTM A 333 AND ASME SA 333 ACC. GR 6 ASTM A 333 E ASME SA 333	Ends BEVE SMU
Dimensions / Dimensioni: ø12.750" O.D. x .330" W.T. ø323.90mm O.D. x 8.38mm W.T.	Schedule / Schedula: . .	Length / Lunghezza: 32.808 ft ÷ 38.714 ft 10000 mm ÷ 11800 mm	Quantity / Quantità: 28Pcs/Pz 1042'08" ft 46376,3 lb 317.81 mt 21036 kg	Nomin 43.82 65.21

The product certified herein has been manufactured, sampled, tested and inspected in accordance with the stated specifications and has been found to meet the requirements.
This certificate is not a declaration of origin nor may it be used as a declaration of origin.

Il prodotto qui certificato è stato fabbricato, provato, testato e contr
conforme ai requisiti. Questo certificato non è una dichiarazione d'or

CUSTOMER . THIRD PARTY

INSPECTION COMPANY
COMPAGNIA D'ISPEZIONE

.
.

TENARIS QUALITY DEPAR

QUALITY CERTIFICATION DEPT.
UFFICIO CERTIFICAZIONE QUALITA'
SIGOLI Gianluca

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Qualunque alterazione e/o falsificazione sarà perseguita a norma di legge.

CTA Group	Kg 683	Mt 60	Pz No.: 5
This document is reproduced by a computerized system and is conform to the original	Heat No.: A17548	Cta's job: LC0001012	Date: 16/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000995 123A90A		Item: 10

COD QC-3.1-ED.3 REV. 1/2023

ARTROM STEEL TUBES S.A.

Draganesti Str. 30, Slatina, jud. OLT, Romania 230119
Tel: +40 (249) 436862, 434640, 434641 Fax: +40 (249) 434330, 437288
E-mail: office.slatina@artrom.com www.artrom.com
EUID: ROONRC.J28/9/1991; J28/9/31.01.1991 VAT No. RO 1510210/1992
Subscribed and Paid Share Capital: 291.587.538,34 lei

Digitally signed by ARTROM STEEL TUBES SA.
This document is certified to be electronically controlled and approved.
Signature requested by Maria Carmen Ivancea
on 2023-09-14 12:43:59,205+03:00
The original electronic document can be retrieved by scanning the QR code in the left.

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No.: E14315 **Date: 12.09.2023**	**Manufacturer's mark:**	**Customer Order No.:** **OS-0000067**	**PL: 14641**

CUSTOMER: Commerciale Tubi Acciaio S.P.A.

Specifications: ASTM A333: 18; ASME A333-21; ASME B36.10M:18; ASME Section II part A:21; ASME Section II part D, TAB.Y1-19; PED 2014/68/EU (Appendix 1, par. 4.3); Spec. MPD-02-PS-GS Rev. 1	**Dimensions: 88.9 x 5.49 x 12 000 to 12 100 mm** **Steel: Gr. 6**

Description: Hot rolled seamless steel pipes with bevelled ends ASME B16.25; clear lacquered; marking by painting at one end: ARTROM, standard, dimension, steel grade, 11.29 Kg/m, LENGTH (m), 17.0 MPa/NDE, HF, SMLS, 3" STD SCH.40, LT-45, heat no., LOT, mill inspector no. 5, technical control sign; marking at one end: heat no.

Heat No.: A17548	**LOT no.: 526436**		**Steel melt and rolled in ROMANIA**
Quantity	**Pcs**	**Length m**	**Weight kg**
	161	1932.00	21990

Ladle Chemical Analyse (%)

C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	N	V	B	Ca
0.17	1.18	0.003	0.016	0.23	0.10	0.08	0.03	0.23	0.024	0.002	0.001	0.009	0.020	0.0005	0.002

V+Nb+Ti+Cu+Mo+Cr: 0.363 CEiiw=0.415

Product Chemical Analyse (%)

C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B	Ca
0.17	1.20	0.004	0.015	0.20	0.10	0.09	0.02	0.23	0.022	0.001	0.002	0.020	0.0005	0.002
0.17	1.20	0.003	0.015	0.23	0.10	0.08	0.02	0.24	0.022	0.001	0.002	0.020	0.0005	0.002

Mechanical Properties

Heat treatment: normalized at a temperature of 900°C, 12 min, cooled in still air	Charpy V–Notch (ASTM A370)	Melting process: electric arc furnace, fully killed
Hydraulic test pressure (ASTM A999): 17.0 MPa for 5 sec.: OK	KV/Longitudinal 3.33 x 10[mm]	Fine grain
Test Eddy Current Acc. ASTM E309/ISO 10893-1: OK	16 (15; 17; 15) J (-60°C)	Hardness HRB: OD: 81 – 82
Flattening test (ASTM A999): OK	17 (15; 17; 19) J (-55°C)	Hardness HRC max 22
Hot yield at 343°C: 287 MPa (strip longitudinal 6.60 x 5.60 = 37.00 mm²)	KVc/Longitudinal 10 x 10[mm]	[acc to NACE MR0175/ISO 15156;
Hot yield at 538°C: 193 MPa (strip longitudinal 6.20 x 5.55 = 34.44 mm²)	47 (45; 51; 45) J (-60°C)	NACE MR0103/ISO 17945]
	51 (45; 51; 57 J (-55°C)	Residual magnetism: max. 20 Gauss: OK

Visual inspection and dimensional check: OK
NO WELD REPAIR ON HEREBY CERTIFIED TUBES
The manufacturer of pipes is certified in acc. with ISO 9001: 2015, ISO 14001:2015 and ISO 45001:2018
THE PRODUCTS DELIVERED ARE CONTROLLED ON RADIOACTIVITY RESPECTIVELY ARE FREE FROM ADDITIONAL IONIC RADIATION AND MERCURY
The material "not contain intentional additions of elements such as lead, selenium, or sulphur to improve machinability"
Steel grade was treated with calcium for the shape control of micro inclusions.
La société TMK ARTROM S.A. garantit que tous le produits, object cu Certificat susdit, respectent en leur Totalité les Specifications de l'article 15 de l'Arrete Ministériel du 24 Mars 1978 modifié.
Cmax 0.25%, Pmax 0.05%, Smax 0.05%, Rm (N/mm2) max700, A(Lo=5.65√So) min.16% long, Rm(A-2) min 10500
E max0.9, A (Lo=5.65√So) min14%trans, RAmin 10500

Additional remarks: The requirements are fulfilled as per Annex 1 – Test results

CHIEF OF QC & TESTING OF THE METALLURGICAL TUBES PRODUCTS
Dipl. Eng. Silviu Barbulescu

MILL INSPECTOR
Eng. Constantin Lupu

This MTC is digitally signed and sealed by ARTROM STEEL TUBES S.A. IT system. To check its authenticity and integrity, please scan the QR code to download the original electronic document from our site. If you already received an electronic copy from your supplier, please make sure that the file is digitally signed by ARTROM STEEL TUBES S.A. Falsification of this document is punishable under the legal provisions and entitles us to claim damages.

THIS IS FOR CERTIFY THAT THE MATERIAL HEREIN DESCRIBED HAS BEEN MANUFACTURED WITH THE ORDERED SPECIFICATION AND THAT INFORMATION IS CORRECT, THEY MEET THE SPECIFICATION'S REQUIREMENTS AND ARE RECORDS IN OUR COMPANY DOCUMENTS.

CTA Group		Kg 683	Mt 60	Pz No.: 5
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Customer : ROSETTI MARINO SPA		P.O. No.: PO: 1724000995 123A90A		Item: 10

COD QC-3.1-ED.3 REV. 1/2023

ARTROM STEEL TUBES S.A.

Draganesti Str. 30, Slatina, jud. OLT, Romania 230119
Tel: +40 (249) 436862, 434640, 434641 Fax: +40 (249) 434330, 437288
E-mail: office.slatina@artrom.com www.artrom.com
EUID: ROONRC.J28/9/1991; J28/9/31.01.1991 VAT No. RO 1510210/1992
Subscribed and Paid Share Capital: 291.587.538,34 lei

No: E14315
Part 2
Annex:1 ; Page no.: 1/1

Test Results Mechanical Properties

TENSILE TEST (ASTM A370) – at room temperature- Test Specimen / Strip–longitudinal		Rp0.2 MPa	Rm MPa	Elongation %	Rp0.2/ Rm
Dimension – Specimen (mm): 1. 19.30 x 5.50 / 2. 19.60 x 5.60 / 3. 19.40 x 5.55 / 4. 19.25 x 5.45 / 5. 19.40 x 5.50 / 6. 19.30 x 5.55 / 7. 19.30 x 5.55 / 8. 19.30 x 5.60	1.	378	536	32	0.71
	2.	371	531	33	0.70
	3.	378	539	32	0.70
Section – Specimen (mm^2): 1. 107.10 / 2. 110.78 / 3. 108.65 / 4. 105.85 / 5. 107.67 / 6. 108.08 / 7. 108.08 / 2. 109.05	4.	381	531	31	0.72
	5.	386	537	32.5	0.72
	6.	380	531	31	0.72
Length - Specimen (Lo) (mm): 1. 50.8 / 2. 50.8 / 3. 50.8 / 4. 50.8 / 5. 50.8 / 6. 50.8 / 7. 50.8 / 8. 50.8	7.	376	536	32	0.70
	8.	377	531	32	0.71

CHIEF OF QC & TESTING OF THE METALLURGICAL TUBES PRODUCTS
Dipl. Eng. Silviu Barbulescu

MILL INSPECTOR
Eng. Constantin Lupu

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INTERPIPE NIKO TUBE

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 24A2347 (A03)
Аркуш / Page 1
Аркушів / Pages 4
Дата / Data 06.03.2024

Вантажоодержувач/ Consignee (A06.1) Commerciale Tubi Acciaio S.p.a. Viale Lidice,40, 10095 Grugliasco (TO), ITALY	Контракт №/ Contract # (A07) COC23/2234
	Заводське замовлення/Production order # (A08) 23-010401
Країна/ Country (A06.1) Italy	№ замовлення клієнта/ Customers ref # (A09) SM30121/OS0000108
Транспортний засіб/ Vehicle № AO4618CH/AO4248XP	

(B01,B02,B03) Стан постачання / Dellivery condition	Труби сталеві безшовні гарячекатані для трубопроводів/Seamless steel hot-rolled pipes for pipelines
	ASTM A333/A333M-2018/ ASME SA333/SA333M-2019/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015
	6
	Труби відвантажені з фаскою./Pipes are beveled. Фаска за стандартом ASME B16.25 рис. 2a./Bevelled ends as per ASME B16.25 Fig 2a.
	Кінці труб оснащені пластиковими протекторами./The ends of pipes are equipped by plastic protectors.
	Труби покриті лаком./Pipes are coated with varnish.

Додаткова інформація/Additional information
Твердість відповідає вимогам NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB)./Hardness meets the requirements NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB).

Термообробка/Heat treatment
Труби виготовлені шляхом гарячої деформації і нормалізовані при температурі 845... 945 град., охолодження на повітрі./Pipes produced by Hot Forming followed by normalizing at the temperature 845 deg C to 945 deg C cooled at air.

№ поз. Item No	(B07.4) Номер лакунка Bundle#	(B07.3) Номери труб Pipe#	(B07.1) Номер плавки Heat#	(B07.2) Номер партії Inspection Lot#	(B09) Зовнішній діаметр OD	(B09) Товщина стінки WT	(B010) Довжина Length	(B11) Загальна довжина Total length	(B08) штуки pieces	(B13) Фактична вага Actual weight	
										брутто gross	нетто net
					мм mm	мм mm	м m	м m		кг kg	кг kg
1	24-12-02930	97-105	1234140	1306	114.3	6.02	10.00-11.80	105,92	9	1708	1698
2	24-12-02931	106-113	1234140	1306	114.3	6.02	10.00-11.80	94,15	8	1514	1504
				NPS 4	**Sch 40 STD**	**РАЗОМ/TOTAL**		**200,07**	**17**	**3222**	**3202**

ПАКУНКІВ/BUNDLES 2

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INTERPIPE NIKO TUBE

The testing laboratory is accredited in accordance with the requirements of DSTU EN ISO/IEC 17025:2019 201369

ООВ ВНІП-ТЕСТ № 80054 ДСТУ ISO 9001:2016

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE
EN 10204-2004/3.1 (A02)

No : 24A2347 (A03)
Аркуш / Page 2
Аркушів / Pages 4
Дата / Data 06.03.2024

(C71) **Хімічний склад по сертифікатним даним на заготівку в % /Heat analysis acc.to the billet manufacturer certificate %**

(B07.1) Номер плавки Heat #	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000
min	-	-	-	-	-	-	-	-	-	-	-	-	-	-
max	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1234140	16.8	101.4	21.9	4	11	7.8	11.4	21.6	10	4	3	1	29	0.4

НД на заготівку/Normative documentation for billets	ТУ №18-2023
Завод виробник/Plant - manufacturer	"Дніпросталь"/"MP"DNEPROSTEEL"LLC
(C70)	Сталь вироблена методом плавління в електродуговій печі з подальшим безперервним розливом. Сталь повністю розкислена та дрібнозерниста. Сталь розкислена алюмінієм. Заготовка виготовлена з чавуну та сталі на ТОВ «МЗ Дніпросталь» (ЄДРПОУ номер 33718431) за адресою: Україна, м. Дніпро, вул. Дніпросталівська 4/ The steel is produced by melting in an electric arc furnace followed by continuous casting. The steel is fully killed and fine-grained. The steel is killed with aluminium. The billet is made of cast iron and steel at "MP"DNEPROSTEEL"LLC (USREOU number 33718431) at the following address: 4, Dneprostalivska Str., Dnipro, Ukraine.
(C93-C99)	Не містить жодних матеріалів або компонентів, що походять з Росії, Білорусі, окупованих територій України (Крим, Донецька, Луганська, Херсонська, Запорізька області), Ірану, Сирії, Північної Кореї чи будь-якої іншої санкційної юрисдикції. Митний код: заготовка, одержана безперервним литтям, кругла, з нелегованої сталі, з масовою часткою вуглецю менш як 0,25 % - 720719/ Does not contain any materials or components originating from Russia, Belarus, the occupied territories of Ukraine (Crimea, Donetsk, Luhansk, Kherson, Zaporizhzhia regions), Iran, Syria, North Korea or any other sanctioned jurisdiction. Customs code: The billets produced by continuous casting, round, of unalloyed steel with a mass fraction of carbon less than 0.25% – 720719

(C72) **Результати контролю хімічного складу метала труб/Results of chemical analysis of pipes**

(B07.1) Номер плавки Heat #	Номер партії Lot#	(C00.1) зразок Test piece	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000
min			-	-	-	-	-	-	-	-	-	-	-	-	-	-
max			-	-	-	-	-	-	-	-	-	-	-	-	-	-
1234140		1	16	99	24	5	9	8	11	21	9	3	1	1	29	0.4
		2	17	99	24	5	9	8	11	21	9	3	2	1	29	0.4

Результати випробувань труб - Test results for pipes

Випробування на розтягнення/ Tensile test ASTM A370

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності t0,5 Yield strength t0,5	(C11) Межа плинності t0,5 Yield strength t0,5 t=	(C13) Відносне подовження Elongation 50	(C13) Відносне подовження Elongation 50 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		415	-	240	-	26,0	-	-	-	-				
max		-	-	-	-	-	-	-	-	-				
1234140	1306	495	-	315	-	36,0	-	-	-	-	L	25.4		50
1234140	1306	500	-	330	-	36,0	-	-	-	-	L	25.4		50

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 24A2347 (A03)
Аркуш / Page 3
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Дата / Data 06.03.2024

Випробування на удар/Impact test ASTM E23

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1234140	1306	L	KV -45°C	9	39	41	40	39,9		10x5

* L - поздовжній зразок/Longitudial spesimen; T - поперечний зразок/transverse spesimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

(C30) **Твердість / Hardness test temperature +20°C**

(B07.1) Номер плавки Heat #	(B07.2) Номер партії Lot #	HRB (C31.1) 1	HRB (C31.1) 2	HRB (C31.1) 3	HRB (C32.1) ср.знач./av.	HRC (C31.2)	HB (C31.3) 1	HB (C31.3) 2	HB (C31.3) 3	HB (C31.3) ср.знач./av.	HV (C31.4) 1	HV (C31.4) 2	HV (C31.4) 3	HV (C31.4) 4	HV (C32.4) ср.знач./av.
min		-	-	-	-	-	-	-	-	-	-	-	-	-	-
max		100	100	100	100	22	-	-	-	-	-	-	-	-	-
1234140	1306	78	79	78	78	<22	-	-	-	-	-	-	-	-	-

(C50,D55)
Інші види контролю / Other tests

Вид випробування/ Type of test	Параметри/ Criteria		Результати контролю/ Test results
Сплющування/ Flattening tes	Труби пройшли випробування на сплющування./Pipes passed flattening test.	100%	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic tes	15,0MPa/5sec.	100%	Задовільно / Satisfactory
Візуальний контроль/ Visual inspectio	Вироби піддавалися візуальному огляду і контролю розмірів. / Visual and dimensional test is satisfactory.	100%	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspectio	За стандартом./As per Standard.	100%	Задовільно / Satisfactory

(A04,B06)
Маркування фарбою/ Marking paint

{Логотип полный} ASTM A333/A333M/ASME SA333/SA333M/ANSI/NACE MR0175/ISO 15156-2/ANSI/NACE MR0103/ISO 17945 114,3 6,02 6 HF SMLS {HEAT} 15,2MPA {длина трубы в метрах до двух десятичных знаков} {Вес трубы в кг} NPS 4 SCH 40 STD LT -45C PO#SM30121/OS0000108 {Номер трубы} {месяц год} {Тип покрытия}

(Z01)
Труби виготовлені і випробувані відповідно до вимог ASTM A333/A333M-2018/ ASME SA333/SA333M-2019/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 і замовлення / Pipes were produced and inspected according to requirements of ASTM A333/A333M-2018/ ASME SA333/SA333M-2019/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 and order's requirements

(A05,Z02,Z03)

Дата/Data	
06.03.2024	Підпис особи, відповідальної за видачу сертифікату /Signature of Certificate ispector Сокур М.М./Sokur M.N .

Вказівка в дужках відповідає кодам згідно EN 10168 /Indication in parentheses correspond to sttributes according to EN 10168.

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INTERPIPE NIKO TUBE

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ООВ ВНІТІ-ТЕСТ
№ 80054
ДСТУ ISO 9001:2015

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
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EN 10204-2004/3.1 (A02)

No : 24A2347
Аркуш / Page 4
Аркушів / Pages 4
Дата / Data 06.03.2024 (A03)

(Z05)
Ваші пропозиції щодо поліпшення продукції просимо надсилати на ел.адресу / Please send Your proposals for improving the product by e-mail or fax or by phone info@ nstp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379. e-mail: info@ua.interpipe.biz Phone: +38 (056)74-74-066 Fax: +38(056)770-20-01 Цей інспекційний сертифікат стосується лише перерахованої в ньому продукції. Неприпустимо внесення змін або інше неправомірне використання сертифіката. /This inspection certificateis only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution

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Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000995 123A90A		Item: 30

ІНТЕРПАЙП НІКО ТЬЮБ

ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ «ІНТЕРПАЙП НІКО ТЬЮБ»
Юридична адреса : пр.Трубників, 56, м. Нікополь, Україна, 53200
Адреса виробництва : пр.Трубників, 56, м. Нікополь, Україна, 53200
Контактна інформація: +38(0566) 63-01-33, www.interpipe.biz

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 1127/Б/П
INSPECTION CERTIFICATE № 1127/Б/П
EN 10204-2004/3.2

Вантажоодержувач BUYER: EN GTP SPA Entrep. Natio. Grands Travaux Petroliers Z.I. deReghaia BP 09 - ALGER – 16000 ALGERIE

Контракт № Contract #: MEO21/0298

Заводське замовлення № Production order #: 009417

Країна Country: Algeria

Транспортний засіб Vehicle №:

Аркуш 1 Sheet Аркушів 2 Sheets

Дата Date: 08.02.2022г.

Найменування та код товару Description and code of goods	Найменування стандартів Specifications	Клас постачання Class of delivery	Тип різьблення Thread type
Трубы стальные бесшовные горячекатаные для трубопроводов Seamless steel hot-rolled pipes for pipelines	ASTM A333/A333M-2018/ ASME SA333/SA333M-2019		

№ поз. Item No	Номер пакунка Bundle #	Марка сталі Grade. Коротке позначення Brief Designation	Номер плавки Heat #	Номер партії Inspection Lot #	Розміри Dimensions: Діаметр OD, мм mm	Товщина стінки WT, мм mm	Довжина length, м m	Загальна довжина Total length, м m	шт pieces	Фактична вага Actual weight: брутто gross, кг kg	нетто net, кг kg
1.	22-VR2-02554	6	1220140	302	219.1	6.35	11.60-11.80	58,59	5	1 958	1 953
2.	22-VR2-02555	6	1220140	302	219.1	6.35	11.60-11.80	58,63	5	1 965	1 960
3.	22-VR2-02556	6	1220140	302	219.1	6.35	11.60-11.80	58,51	5	1 993	1 988
4.	22-VR2-02557	0	1220140	302	219.1	6.35	11.60-11.80	23,43	2	795	790
5.	22-VR2-02558	6	1220140	302	219.1	6.35	11.60-11.80	11,71	1	401	400
6.	22-VR2-02559	6	1220140	303	219.1	6.35	11.60-11.80	58,61	5	1 959	1 954
7.	22-VR2-02560	6	1220140	303	219.1	6.35	11.60-11.80	58,51	5	1 974	1 969
8.	22-VR2-02561	6	1220140	303	219.1	6.35	11.60-11.80	58,60	5	1 971	1 966
9.	22-VR2-02562	6	1220140	303	219.1	6.35	11.60-11.80	23,46	2	795	790
10.	22-VR2-02563	6	1220140	303	219.1	6.35	11.60-11.80	11,71	1	396	395
11.	22-VR2-02564	6	1220140	301	219.1	6.35	11.60-11.80	58,57	5	1 977	1 972
12.	22-VR2-02565	6	1220140	301	219.1	6.35	11.60-11.80	58,57	5	1 972	1 967
13.	22-VR2-02566	6	1220140	301	219.1	6.35	11.60-11.80	58,60	5	1 968	1 963
14.	22-VR2-02567	6	1220140	301	219.1	6.35	11.60-11.80	58,66	5	1 967	1 962
15.	22-VR2-02568	6	1220140	301	219.1	6.35	11.60-11.80	58,53	5	1 978	1 973
16.	22-VR2-02569	6	1220140	301	219.1	6.35	11.60-11.80	58,48	5	1 961	1 956
17.	22-VR2-02570	6	1220140	301	219.1	6.35	11.60-11.80	58,60	5	1 972	1 967
18.	22-VR2-02571	6	1220140	301	219.1	6.35	11.60-11.80	11,72	1	400	399
19.	22-VR2-02572	6	1220140	301	219.1	6.35	11.60-11.80	58,60	5	1 972	1 967
20.	22-VR2-02573	6	1220140	301	219.1	6.35	11.60-11.80	23,44	2	796	791
21.	22-VR2-02574	6	1220140	303	219.1	6.35	11.60-11.80	58,51	5	2 025	2 020
22.	22-VR2-02575	6	1220140	301	219.1	6.35	11.60-11.80	58,64	5	1 957	1 952
23.	22-VR2-02576	6	1220140	301	219.1	6.35	11.60-11.80	58,49	5	1 974	1 969
24.	22-VR2-02577	6	1220140	301	219.1	6.35	11.60-11.80	23,40	2	803	798
25.	22-VR2-02578	6	1220140	301	219.1	6.35	11.60-11.80	23,39	2	805	800
26.	22-VR2-02579	6	1220140	302	219.1	6.35	11.60-11.80	58,59	5	1 967	1 962
27.	22-VR2-02582	6	1220140	302	219.1	6.35	11.60-11.80	23,45	2	790	785
28.	22-VR2-02580	6	1220140	302	219.1	6.35	11.60-11.80	58,62	5	1 987	1 982
29.	22-VR2-02581	6	1220140	302	219.1	6.35	11.60-11.80	58,58	5	1 961	1 956
30.	22-VR2-02583	6	1220140	302	219.1	6.35	11.60-11.80	11,73	1	393	392
31.	22-VR2-02584	6	1220140	301	219.1	6.35	11.60-11.80	58,58	5	1 953	1 948
32.	22-VR2-02585	6	1220140	301	219.1	6.35	11.60-11.80	58,53	5	1 974	1 969
33.	22-VR2-02586	6	1220140	301	219.1	6.35	11.60-11.80	23,43	2	799	794
34.	22-VR2-02613	6	1220140	302	219.1	6.35	11.60-11.80	58,59	5	1 972	1 967
35.	22-VR2-02587	6	1220140	301	219.1	6.35	11.60-11.80	23,43	2	798	793

INTERPIPE NIKO TUBE

LIMITED LIABILITY COMPANY «INTERPIPE NIKO TUBE»
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CTA Group	Kg 778	Mt 23,46	Pz No.: 2
This document is reproduced by a computerized system and is conform to the original	Heat No.: 1220140	Cta's job: LC0001012	Date: 16/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000995 123A90A		Item: 30

№ поз. Item No	Номер пакета Bundle #	Номера труб Pipe #	Марка стали Grade / краткое обозначение Brief Designation	Номер плавки Heat #	Номер партии Inspection Lot #	Размеры Dimensions: диаметр OD мм mm	толщина стенки WT мм mm	длина length м m	Количество Quantity: Общая длина Total length м m	шт pieces	Фактический вес Actual weight: брутто gross кг kg	нетто net кг kg
36.	22-VR2-02588		6	1220140	302	219,1	6,35	11,60-11,80	58,64	5	1 977	1 972
37.	22-VR2-02589		6	1220140	302	219,1	6,35	11,60-11,80	58,60	5	1 987	1 982
38.	22-VR2-02590		6	1220140	302	219,1	6,35	11,60-11,80	58,58	5	1 978	1 973
39.	22-VR2-02591		6	1220140	302	219,1	6,35	11,60-11,80	58,58	5	1 966	1 961
40.	22-VR2-02592		6	1220140	302	219,1	6,35	11,60-11,80	58,61	5	1 949	1 944
41.	22-VR2-02593		6	1220140	302	219,1	6,35	11,60-11,80	58,52	5	1 940	1 935
42.	22-VR2-02594		6	1220140	302	219,1	6,35	11,60-11,80	23,46	2	783	778
43.	22-VR2-02595		6	1220140	301	219,1	6,35	11,60-11,80	58,57	5	1 981	1 976
44.	22-VR2-02596		6	1220140	301	219,1	6,35	11,60-11,80	58,57	5	2 001	1 996
45.	22-VR2-02598		6	1220140	301	219,1	6,35	11,60-11,80	58,51	5	1 966	1 961
46.	22-VR2-02597		6	1220140	301	219,1	6,35	11,60-11,80	58,63	5	1 978	1 973
47.	22-VR2-02599		6	1220140	301	219,1	6,35	11,60-11,80	58,54	5	1 958	1 953
48.	22-VR2-02600		6	1220140	301	219,1	6,35	11,60-11,80	23,44	2	798	793
49.	22-VR2-02601		6	1220140	301	219,1	6,35	11,60-11,80	11,73	1	384	383
50.	22-VR2-02602		6	1220140	303	219,1	6,35	11,60-11,80	58,57	5	1 993	1 988
51.	22-VR2-02603		6	1220140	303	219,1	6,35	11,60-11,80	58,58	5	1 976	1 971
52.	22-VR2-02604		6	1220140	303	219,1	6,35	11,60-11,80	58,48	5	1 992	1 987
53.	22-VR2-02605		6	1220140	303	219,1	6,35	11,60-11,80	58,46	5	2 009	2 004
54.	22-VR2-02606		6	1220140	303	219,1	6,35	11,60-11,80	58,60	5	1 986	1 981
55.	22-VR2-02607		6	1220140	303	219,1	6,35	11,60-11,80	58,58	5	1 976	1 971
56.	22-VR2-02608		6	1220140	303	219,1	6,35	11,60-11,80	58,62	5	1 999	1 994
57.	22-VR2-02609		6	1220140	303	219,1	6,35	11,60-11,80	11,73	1	400	399
58.	22-VR2-02610		6	1220140	302	219,1	6,35	11,60-11,80	58,63	5	1 958	1 953
59.	22-VR2-02611		6	1220140	302	219,1	6,35	11,60-11,80	58,50	5	1 970	1 965
60.	22-VR2-02612		6	1220140	302	219,1	6,35	11,60-11,80	58,49	5	2 003	1 998
61.	22-VR2-02614		6	1220140	302	219,1	6,35	11,60-11,80	58,63	5	1 991	1 986
62.	22-VR2-02615		6	1220140	302	219,1	6,35	11,60-11,80	58,55	5	1 989	1 984
63.	22-VR2-02616		6	1220140	302	219,1	6,35	11,60-11,80	23,34	2	790	785
64.	22-VR2-02617		6	1220140	303	219,1	6,35	11,60-11,80	58,47	5	1 997	1 992
65.	22-VR2-02618		6	1220140	303	219,1	6,35	11,60-11,80	58,58	5	1 985	1 980
66.	22-VR2-02619		6	1220140	303	219,1	6,35	11,60-11,80	58,54	5	1 984	1 979
67.	22-VR2-02620		6	1220140	303	219,1	6,35	11,60-11,80	23,33	2	807	802
68.	22-VR2-02621		6	1220140	303	219,1	6,35	11,60-11,80	23,20	2	810	805
		NPS 8	Sch 20					ТОТАЛ/ИТОГО	3244,35	277	109589	109273
								BUNDLES/ПАКЕТОВ 68				

ІНТЕРПАЙП НІКО ТЬЮБ

ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ «ІНТЕРПАЙП НІКО ТЬЮБ»
Юридична адреса : пр.Трубників, 56, м. Нікополь, Україна, 53200
Адреса виробництва : пр.Трубників, 56, м. Нікополь, Україна, 53200
Контактна інформація: +38(0566) 63-01-33, www.interpipe.biz

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 1127/Б/П
INSPECTION CERTIFICATE № 1127/Б/П

Аркуш 2 Sheet Аркушів 2 Sheets

Хімічний склад за сертифікатними даними на заготівку та результати контролю хімічного складу металу труб
Heat analysis acc, to the billet manufacturer certificate & results of chemical analysis of pipes

Номер плавки Heat #	Номер партії Lot #	Лабораторія Laboratory	Хімічний склад Chemical composition % C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al$_{заг}$ x1000	B x1000	CE x100	Завод виробник заготовки Steel supplier
min			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
max			23	-	-	-	-	-	-	-	-	-	-	-	-	-	43	
1220140		DniproSteel	18	105	27	3	18	9	10	20	10	6	3	2	33	0.3	40	"MP"DNEPROSTEEL"LLC
		NIKOTUBE*	20	104	29	2	19	8	9	20	11	7	2	1	38	0.3	41	"Дніпросталь"
		NIKOTUBE*	19	103	28	2	18	8	9	20	11	7	1	1	38	0.3	40	

Аналіз плавки згідно сертифікату заводу-виробника /* - контрольний аналіз в/д труб.
Сталь вироблена методом плавлення в печі електродуги з подальшим безперервним розливанням. Сталь цю повністю розкислює. Адреса заводу виробника заготовки: Україна, 49051, г.Дніпро, вул. Дніпростальевська, 4.Steel has been produced by the EAF with continuous casting process. Steel is fully killed .The address of steel supplier: Ukraine,49051, Dnipro, 4 Dniprostalivska str.
При розрахунку вуглецевого еквіваленту використана формула:/When calculating the carbon equivalent the following formula was used:
CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

Результати випробувань труб - Test results for pipes

Номер плавки Heat#	Номер партії Lot#	Механічні властивості Mechanical Properties: Випробування на розтягнення Tensile test: Межа міцності Tensile strength	Межа плинності RT0.5 Yield strength RT0.5	Відносне подовження Elongation	Ставлення отов Rabo otов	Орієнтація зразка Specimens orientation*	Ширина смугового зразка Width of strip specimen	Діаметр циліндричного зразка Diameter of cylindrical specimen	Довжина зразка Length of specimen	Твердість Hardness Середнє значення Average		Випробування на удар /Impact test: Орієнтація*	Тип надрізання,температура Type of notch; temprature	Норматив/Norm	Середнє значення Average	В %зка складова Shear area	Розмір зразків** Specimens size **
	min	MPa 415	MPa 240	% -	- -		мм/ mm	мм/ mm	мм/ mm	HRB - 100	HRC - 22			min	Дж/J	%	мм/ mm
	max	-	-	-													
1220140	301	555	395	37.0		L	38.1		50	84 84 82 av.83.3	<22	L	KV -48°C	27	37 49 35 av.40.3		10x5
		540	370	35.0		L	38.1		50								
		545	395	35.0		L	38.1		50								
		545	400	34.0		L	38.13		50								
		545	385	32.0		L	38.1		50								
1220140	302	555	415	33.0		L	38.1		50	85 84 86 av.85.0	<22	L	KV -48°C	27	42 32 35 av.36.3		10x5
		560	410	34.0		L	38.1		50								
		550	385	36.0		L	38.1		50								
		545	375	33.0		L	38.1		50								
		550	395	34.0		L	38.1		50								
1220140	303	545	385	32.0		L	38.1		50	84 85 84 av.84.3	<22	L	KV -48°C	27	22 37 31 av.30		10x5
		550	400	33.0		L	38.1		50								
		555	395	33.0		L	38.1		50								
		540	370	35.0		L	38.1		50								
		555	400	32.0		L	38.1		50								

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

Інші види контролю/ Other tests

Вид випробування/ Type of test	Параметри/ Criteria	Результати контролю/Test results
Сплющування/ Flattening test	Труби пройшли випробування на сплющування./Pipes passed flattening test.	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic test	100% / 9,0 MPa / 10 сек.	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-destructive inspection full length body	Метод контролю:/Method:/Магнітоіндукційний контроль:/Magnetic flux leakage inspection:/Поздовжня риска 12,5% на зовнішній і внутрішній поверхні /Longitudinal notch with depth 12,5% on external and internal surface.	Задовільно / Satisfactory
Візуальний контроль/ Visual inspection	За стандартом / As per Standard	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspection	За стандартом./As per Standard.	Задовільно / Satisfactory

INTERPIPE NIKO TUBE

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CTA Group		Kg 778	Mt 23,46	Pz No.: 2
This document is reproduced by a computerized system and is conform to the original		Heat No.: 1220140	Cta's job: LC0001012	Date: 16/05/2024
Customer : ROSETTI MARINO SPA		P.O. No.: PO: 1724000995 123A90A		Item: 30

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 1127/Б/П
INSPECTION CERTIFICATE № 1127/Б/П

Аркуш 2 Sheet Аркушів 2 Sheets

Стан постачання/ Delivery condition

Загальні умови/ General condition	Труби виготовлені і випробувані відповідно до вимог ASTM A333/A333M-2018/ ASME SA333/SA333M-2019 і замовлення / Pipes were produced and inspected according to requirements of ASTM A333/A333M-2018/ ASME SA333/SA333M-2019 and order's requirements
Стан постачання/ Delivery condition	Нормалізація з прокатного нагріву./Normalized by rolling heat.
Кольорове кодування/ Color coding	Наносити на кожну трубу поздовжню смугу по всій довжині шириною 12мм. Колір фарби – яскраво-зелений.
Покриття/ Coating	Труби покриті лаком./Pipes are coated with varnish.
Маркування фарбою/ Marking paint	{Логотип полный} ASTM A333/A333M/ASME SA333/SA333M 8.625 0.250 6 HF SMLS {HEAT} NPS 8 SCH 20 LT -50F {Тип покрытия}
Фаска (якщо потрібно)/ Bevelled ends if required	Фаска за стандартом ASME B16.25 рис. 2а./Bevelled ends as per ASME B16.25 Fig 2a.
Захист кінців/ Protection of pipe ends	Кінці труб оснащені пластиковими ковпачками/ The ends of pipes are equipped by plastic caps
Додаткова інформація/ Additional information	Вага фактична./ Actual weight. Сталь спокійна дрібнозерниста./Steel is fully Killed and made to fine grain practice. Твердість відповідає вимогам NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB)./Hardness meets the requirements NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB).

Країна походження: Україна Country of origin: Ukraine.

Ваші пропозиції щодо поліпшення продукції просимо направляти на ел.адрес/ Please send Your proposals for improving the product by e-mail or fax or by phone
info@nstp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379.
e-mail: info@as.interpipe.biz, Phone: +97148657411 Fax: +97148657412

Цей інспекційний сертифікат належить тільки до перерахованої в ньому продукції.Неприпустимі внесення змін без згоди та неправомірне використання сертифіката.This inspection certificate is only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution

Інспекційний сертифікат сформовано та перевірено контролером сертифікатором Вовк Н.Г.
/Inspection Certificate was drawn up and checked by the Certificate Inspector Vovk N.G.

Дата: 08.02.2022
Date:

Підпис інспектора Зі сторони
Signature of third Party Inspector

Підпис ВТК
Signatures QCD

INTERPIPE NIKO TUBE E5

ІНТЕРПАЙП НІКО ТЬЮБ

ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ «ІНТЕРПАЙП НІКО ТЬЮБ»
Юридична адреса : пр.Трубників, 56, м. Нікополь, Україна, 53200
Адреса виробництва : пр.Трубників, 56, м. Нікополь, Україна, 53200
Контактна інформація: +38(0566) 63-01-33, www.interpipe.biz

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 1127/Б/П
INSPECTION CERTIFICATE № 1127/Б/П
EN 10204-2004/3.2

Вантажоодержувач / BUYER: EN GTP SPA Entrep. Natio. Grands Travaux Petroliers Z.I. deReghaia BP 09 - ALGER – 16000 ALGERIE

Контракт № / Contract #: MEO21/0298

Заводське замовлення № / Production order #: 009417

Країна / Country: Algeria

Транспортний засіб / Vehicle №:

Аркуш 1 / Sheet — Аркушів 2 / Sheets

Дата / Date: 08.02.2022г.

Найменування та код товару / Description and code of goods	Найменування стандартів / Specifications	Клас постачання / Class of delivery	Тип різьблення / Thread type
Трубы стальные бесшовные горячекатаные для трубопроводов / Seamless steel hot-rolled pipes for pipelines	ASTM A333/A333M-2018/ ASME SA333/SA333M-2019		

№ поз. Item No	Номер пакунка Bundle #	Марка сталі Grade: Коротке позначення Brief Designation	Номер плавки Heat #	Номер партії Inspection Lot #	Розміри Dimensions: Діаметр OD, дюйм inch	Товщина стінки WT, дюйм inch	Довжина length, фут ft	Загальна довжина Total length, фут ft	шт pieces	Фактична вага Actual weight: брутто gross, фунт lb	нетто net, фунт lb
1.	22-VR2-02554	6	1220140	302	8.625	0.250	38.1-38.7	192.2	5	4316.6	4305.6
2.	22-VR2-02555	6	1220140	302	8.625	0.250	38.1-38.7	192.4	5	4332.1	4321.1
3.	22-VR2-02556	6	1220140	302	8.625	0.250	38.1-38.7	192.0	5	4393.8	4382.8
4.	22-VR2-02557	0	1220140	302	8.625	0.250	38.1-38.7	76.9	2	1752.7	1741.6
5.	22-VR2-02558	6	1220140	302	8.625	0.250	38.1-38.7	38.4	1	884.1	881.8
6.	22-VR2-02559	6	1220140	303	8.625	0.250	38.1-38.7	192.3	5	4318.9	4307.8
7.	22-VR2-02560	6	1220140	303	8.625	0.250	38.1-38.7	192.0	5	4351.9	4340.9
8.	22-VR2-02561	6	1220140	303	8.625	0.250	38.1-38.7	192.3	5	4345.3	4334.3
9.	22-VR2-02562	6	1220140	303	8.625	0.250	38.1-38.7	77.0	2	1752.7	1741.6
10.	22-VR2-02563	6	1220140	303	8.625	0.250	38.1-38.7	38.4	1	873.0	870.8
11.	22-VR2-02564	6	1220140	301	8.625	0.250	38.1-38.7	192.2	5	4358.5	4347.5
12.	22-VR2-02565	6	1220140	301	8.625	0.250	38.1-38.7	192.2	5	4347.5	4336.5
13.	22-VR2-02566	6	1220140	301	8.625	0.250	38.1-38.7	192.3	5	4338.7	4327.7
14.	22-VR2-02567	6	1220140	301	8.625	0.250	38.1-38.7	192.5	5	4336.5	4325.5
15.	22-VR2-02568	6	1220140	301	8.625	0.250	38.1-38.7	192.0	5	4360.7	4349.7
16.	22-VR2-02569	6	1220140	301	8.625	0.250	38.1-38.7	191.9	5	4323.3	4312.2
17.	22-VR2-02570	6	1220140	301	8.625	0.250	38.1-38.7	192.3	5	4347.5	4336.5
18.	22-VR2-02571	6	1220140	301	8.625	0.250	38.1-38.7	38.5	1	881.8	879.6
19.	22-VR2-02572	6	1220140	301	8.625	0.250	38.1-38.7	192.3	5	4347.5	4336.5
20.	22-VR2-02573	6	1220140	301	8.625	0.250	38.1-38.7	76.9	2	1754.9	1743.9
21.	22-VR2-02574	6	1220140	303	8.625	0.250	38.1-38.7	192.0	5	4464.4	4453.3
22.	22-VR2-02575	6	1220140	301	8.625	0.250	38.1-38.7	192.4	5	4314.4	4303.4
23.	22-VR2-02576	6	1220140	301	8.625	0.250	38.1-38.7	191.9	5	4351.9	4340.9
24.	22-VR2-02577	6	1220140	301	8.625	0.250	38.1-38.7	76.8	2	1770.3	1759.3
25.	22-VR2-02578	6	1220140	301	8.625	0.250	38.1-38.7	76.7	2	1774.7	1763.7
26.	22-VR2-02579	6	1220140	302	8.625	0.250	38.1-38.7	192.2	5	4336.5	4325.5
27.	22-VR2-02582	6	1220140	302	8.625	0.250	38.1-38.7	76.9	2	1741.6	1730.6
28.	22-VR2-02580	6	1220140	302	8.625	0.250	38.1-38.7	192.3	5	4380.6	4369.6
29.	22-VR2-02581	6	1220140	302	8.625	0.250	38.1-38.7	192.2	5	4323.3	4312.2
30.	22-VR2-02583	6	1220140	302	8.625	0.250	38.1-38.7	38.5	1	866.4	864.2
31.	22-VR2-02584	6	1220140	301	8.625	0.250	38.1-38.7	192.2	5	4305.6	4294.6
32.	22-VR2-02585	6	1220140	301	8.625	0.250	38.1-38.7	192.0	5	4351.9	4340.9
33.	22-VR2-02586	6	1220140	301	8.625	0.250	38.1-38.7	76.9	2	1761.5	1750.5
34.	22-VR2-02613	6	1220140	302	8.625	0.250	38.1-38.7	192.2	5	4347.5	4336.5
35.	22-VR2-02587	6	1220140	301	8.625	0.250	38.1-38.7	76.9	2	1759.3	1748.3

INTERPIPE NIKO TUBE

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Contact information: +38(0566) 63-01-33, www.interpipe.biz

CTA Group	Kg 778	Mt 23,46	Pz No.: 2
This document is reproduced by a computerized system and is conform to the original	Heat No.: 1220140	Cta's job: LC0001012	Date: 16/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000995 123A90A		Item: 30

№ поз. Item No	Номер пакета Bundle #	Номера труб Pipe #	Марка стали Grade краткое обозначение Brief Designation	Номер плавки Heat #	Номер партии Inspection Lot #	Размеры Dimensions диаметр OD дюйм inch	толщина стенки WT дюйм inch	длина length фут ft	Общая длина Total length фут ft	Количество Quantity шт pieces	Фактический вес Actual weight брутто gross фунт lb	нетто net фунт lb
36.	22-VR2-02588		6	1220140	302	8.625	0.250	38.1-38.7	192.4	5	4358.5	4347.5
37.	22-VR2-02589		6	1220140	302	8.625	0.250	38.1-38.7	192.3	5	4380.6	4369.6
38.	22-VR2-02590		6	1220140	302	8.625	0.250	38.1-38.7	192.2	5	4360.7	4349.7
39.	22-VR2-02591		6	1220140	302	8.625	0.250	38.1-38.7	192.2	5	4334.3	4323.3
40.	22-VR2-02592		6	1220140	302	8.625	0.250	38.1-38.7	192.3	5	4296.8	4285.8
41.	22-VR2-02593		6	1220140	302	8.625	0.250	38.1-38.7	192.0	5	4277.0	4265.9
42.	22-VR2-02594		6	1220140	302	8.625	0.250	38.1-38.7	77.0	2	1726.2	1715.2
43.	22-VR2-02595		6	1220140	301	8.625	0.250	38.1-38.7	192.2	5	4367.4	4356.3
44.	22-VR2-02596		6	1220140	301	8.625	0.250	38.1-38.7	192.2	5	4411.4	4400.4
45.	22-VR2-02598		6	1220140	301	8.625	0.250	38.1-38.7	192.0	5	4334.3	4323.3
46.	22-VR2-02597		6	1220140	301	8.625	0.250	38.1-38.7	192.4	5	4360.7	4349.7
47.	22-VR2-02599		6	1220140	301	8.625	0.250	38.1-38.7	192.1	5	4316.6	4305.6
48.	22-VR2-02600		6	1220140	301	8.625	0.250	38.1-38.7	76.9	2	1759.3	1748.3
49.	22-VR2-02601		6	1220140	301	8.625	0.250	38.1-38.7	38.5	1	846.6	844.4
50.	22-VR2-02602		6	1220140	303	8.625	0.250	38.1-38.7	192.2	5	4393.8	4382.8
51.	22-VR2-02603		6	1220140	303	8.625	0.250	38.1-38.7	192.2	5	4356.3	4345.3
52.	22-VR2-02604		6	1220140	303	8.625	0.250	38.1-38.7	191.9	5	4391.6	4380.6
53.	22-VR2-02605		6	1220140	303	8.625	0.250	38.1-38.7	191.8	5	4429.1	4418.1
54.	22-VR2-02606		6	1220140	303	8.625	0.250	38.1-38.7	192.3	5	4378.4	4367.4
55.	22-VR2-02607		6	1220140	303	8.625	0.250	38.1-38.7	192.2	5	4356.3	4345.3
56.	22-VR2-02608		6	1220140	303	8.625	0.250	38.1-38.7	192.3	5	4407.0	4396.0
57.	22-VR2-02609		6	1220140	303	8.625	0.250	38.1-38.7	38.5	1	881.8	879.6
58.	22-VR2-02610		6	1220140	302	8.625	0.250	38.1-38.7	192.4	5	4316.6	4305.6
59.	22-VR2-02611		6	1220140	302	8.625	0.250	38.1-38.7	191.9	5	4343.1	4332.1
60.	22-VR2-02612		6	1220140	302	8.625	0.250	38.1-38.7	191.9	5	4415.9	4404.8
61.	22-VR2-02614		6	1220140	302	8.625	0.250	38.1-38.7	192.4	5	4389.4	4378.4
62.	22-VR2-02615		6	1220140	302	8.625	0.250	38.1-38.7	192.1	5	4385.0	4374.0
63.	22-VR2-02616		6	1220140	302	8.625	0.250	38.1-38.7	76.6	2	1741.6	1730.6
64.	22-VR2-02617		6	1220140	303	8.625	0.250	38.1-38.7	191.8	5	4402.6	4391.6
65.	22-VR2-02618		6	1220140	303	8.625	0.250	38.1-38.7	192.2	5	4376.2	4365.1
66.	22-VR2-02619		6	1220140	303	8.625	0.250	38.1-38.7	192.1	5	4374.0	4362.9
67.	22-VR2-02620		6	1220140	303	8.625	0.250	38.1-38.7	76.5	2	1779.1	1768.1
68.	22-VR2-02621		6	1220140	303	8.625	0.250	38.1-38.7	76.1	2	1785.7	1774.7
		NPS 8		Sch 20			ТОТАЛИТОГО		10645.2	277	241601.8	240905.4
							BUNDLES/ПАКЕТОВ 68					

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Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000995 123A90A		Item: 30

ІНТЕРПАЙП НІКО ТЬЮБ

ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ «ІНТЕРПАЙП НІКО ТЬЮБ»
Юридична адреса : пр.Трубників, 56, м. Нікополь, Україна, 53200
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 1127/Б/П
INSPECTION CERTIFICATE № 1127/Б/П

Аркуш 2 Sheet | Аркушів 2 Sheets

Хімічний склад за сертифікатними даними на заготівку та результати контролю хімічного складу металу труб
Heat analysis acc. to the billet manufacturer certificate & results of chemical analysis of pipes

Номер плавки Heat #	Номер партії Lot #	Лабораторія Laboratory	Хімічний склад Chemical composition % C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Alкон x1000	B x1000	CE x100	Завод виробник заготовки Steel supplier
min			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
max			23	-	-	-	-	-	-	-	-	-	-	-	-	-	43	
1220140		DniproSteel	18	105	27	3	18	9	10	20	10	6	3	2	33	0.3	40	"MP"DNEPROSTEEL"LLC "Дніпросталь"
		NIKOTUBE*	20	104	29	2	19	8	9	20	11	7	2	1	38	0.3	41	
		NIKOTUBE*	19	103	28	2	18	8	9	20	11	7	1	1	38	0.3	40	

Аналіз плавки згідно сертифікату заводу-виробника /*- контрольний аналіз від труб.
Сталь вироблена методом плавлення в печі електродуги з подальшим безперервним розливанням. Сталь що повністю розкислює. Адреса заводу виробника заготовки: Україна, 49051, г.Дніпро, вул. Дніпросталевська, 4.Steel has been produced by the EAF with continuous casting process. Steel is fully killed .The address of steel supplier: Ukraine,49051, Dnipro, 4 Dniprostalivska str.
При розрахунку вуглецевого еквіваленту використана формула:/When calculating the carbon equivalent the following formula was used:
CE=C+Mn/8+(Cr+Mo+V)/5+(Ni+Cu)/15

Результати випробувань труб - Test results for pipes

Номер плавки Heat#	Номер партії Lot#	Механічні властивості Mechanical Properties: Випробування на розтягнення Tensile test: Межа міцності Tensile strength	Межа плинності Rt0,5 Yield strength Rt0,5	Відносне подовження Elongation	Ставлення strength Ratio strength	Орієнтація зразка Specimens orientation*	Ширина смугового зразка Width of strip specimen	Діаметр циліндричного зразка Diameter of cylindrical specimen	Довжина зразка Length of specimen	Твердість Hardness Середнє значення Average		Випробування на удар /Impact test: Орієнтація*	Тип надрізання, температура Type of notch, temperature	Норматив/Norm	Середнє значення Average	В зразка складова Shear area	Розмір зразків** Specimens size **
		PSI	PSI	%	-		дюйм/ Inch	дюйм/ Inch	дюйм inch	HRB - 100	HRC - 22			min	фут/фунт/lt/lb	%	дюйм/ inch
	min	60000	35000	-	-												
	max	-	-	-													
1220140	301	80500	57500	37.0		L	1.500		1.970	94 84 82 av.83.3	<22	L	KV -54°F	20	27 36 26 av.29.7		0.394x0.197
		78500	53500	35.0		L	1.500		1.970								
		79000	57500	35.0		L	1.500		1.970								
		79000	58000	34.0		L	1.500		1.970								
		79000	56000	32.0		L	1.500		1.970								
1220140	302	80500	60000	33.0		L	1.500		1.970	85 84 86 av.85.0	<22	L	KV -54°F	20	31 24 26 av.27		0.394x0.197
		81000	59500	34.0		L	1.500		1.970								
		80000	56000	36.0		L	1.500		1.970								
		79000	54500	33.0		L	1.500		1.970								
		80000	57500	34.0		L	1.500		1.970								
1220140	303	79000	56000	32.0		L	1.500		1.970	84 85 84 av.84.3	<22	L	KV -54°F	20	16 27 23 av.22		0.394x0.197
		80000	58000	33.0		L	1.500		1.970								
		80500	57500	33.0		L	1.500		1.970								
		78500	53500	35.0		L	1.500		1.970								
		80500	58000	32.0		L	1.500		1.970								

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

Інші види контролю/ Other tests

Вид випробування/ Type of test	Параметри/ Criteria	Результати контролю/Test results
Сплющування/ Flattening test	Труби пройшли випробування на сплющування./Pipes passed flattening test.	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic test	100% / 9,0 MPa / 10 сек.	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-destructive inspection full length body	Метод контролю:/Method:/Магнітоіндукційний контроль:/Magnetic flux leakage inspection:/Поздовжня риска 12,5% на зовнішній і внутрішній поверхні /Longitudinal notch with depth 12,5% on external and internal surface.	Задовільно / Satisfactory
Візуальний контроль/ Visual inspection	За стандартом / As per Standard	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspection	За стандартом./As per Standard.	Задовільно / Satisfactory

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Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000995 123A90A		Item: 30

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 1127/Б/П
INSPECTION CERTIFICATE № 1127/Б/П

Аркуш 2 Sheet Аркушів 2 Sheets

Стан постачання/ Delivery condition

Загальні умови/ General condition	Труби виготовлені і випробувані відповідно до вимог ASTM A333/A333M-2018/ ASME SA333/SA333M-2019 і замовлення / Pipes were produced and inspected according to requirements of ASTM A333/A333M-2018/ ASME SA333/SA333M-2019 and order's requirements
Стан постачання/ Delivery condition	Нормалізація з прокатного нагріву./Normalized by rolling heat.
Кольорове кодування/ Color coding	Наносити на кожну трубу поздовжню смугу по всій довжині шириною 12мм. Колір фарби – яскраво-зелений.
Покриття/ Coating	Труби покриті лаком./Pipes are coated with varnish.
Маркування фарбою/ Marking paint	{Логотип полный} ASTM A333/A333M/ASME SA333/SA333M 8.625 0.250 6 HF SMLS {HEAT} NPS 8 SCH 20 LT -50F {Тип покрытия}
Фаска (якщо потрібно)/ Bevelled ends if required	Фаска за стандартом ASME B16.25 рис. 2а./Bevelled ends as per ASME B16.25 Fig 2a.
Захист кінців/ Protection of pipe ends	Кінці труб оснащені пластиковими ковпачками/ The ends of pipes are equipped by plastic caps
Додаткова інформація/ Additional information	Вага фактична./ Actual weight. Сталь спокійна дрібнозерниста./Steel is fully Killed and made to fine grain practice. Твердість відповідає вимогам NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB)./Hardness meets the requirements NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB).

Країна походження: Україна Country of origin: Ukraine.
Ваші пропозиції щодо поліпшення продукції просимо направляти на ел.адрес/ Please send Your proposals for improving the product by e-mail or fax or by phone
info@nslp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379.
e-mail: info@ae.interpipe.biz. Phone: +97148857411 Fax: +97148857412
Цей Інспекційний сертифікат належить тільки до перерахованої в ньому продукції.Неприпустимі внесення змін або інше неправомірне використання сертифіката.This inspection certificate is only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution
Інспекційний сертифікат сформовано та перевірено контролером сертифікатором Вовк Н.Г./
/Inspection Certificate was drawn up and checked by the Certificate Inspector Vovk N.G.
Дата: 06.02.2022
Data:

Підпис інспектора 3-і сторони :
Signature of 3rd Part Inspector

Підпис ВТК
Signatures QCD

ТОВ "ІНТЕРПАЙП НИКО ТЬЮБ" 1 СЛУЖБА ЯКОСТІ м. Нікополь

INTERPIPE NIKO TUBE E5

ІНТЕРПАЙП НІКО ТЬЮБ

ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ «ІНТЕРПАЙП НІКО ТЬЮБ»
Юридична адреса : пр.Трубників, 56, м. Нікополь, Україна, 53200
Адреса виробництва : пр.Трубників, 56, м. Нікополь, Україна, 53200
Контактна інформація: +38(0566) 63-01-33, www.interpipe.biz

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 0001/П
INSPECTION CERTIFICATE № 0001/П

Вантажоодержувач BUYER: EN GTP SPA Entrep. Natio. Grands Travaux Petroliers Z.I. deReghaia BP 09 - ALGER – 16000 ALGERIE Viale Lidice,40, 10095 Grugliasco (TO), ITALY

Контракт № Contract #: MEO21/0298

Заводське замовлення № Production order #: 009417

Країна Country: Algeria

Транспортний засіб Vehicle №:

Дата Date: 02.05.2022г.

Аркуш 1 Sheet Аркушів 1 Sheets

Найменування та код товару Description and code of goods	Найменування стандартів Specifications	Клас постачання Class of delivery	Тип різьблення Thread type
Трубы стальные бесшовные горячекатаные для трубопроводов Seamless steel hot-rolled pipes for pipelines	ASTM A333/A333M-2018/ ASME SA333/SA333M-2019		

№ поз. Item No	Номер пакунка Bundle #	Марка сталі Grade: Коротке позначення Brief Designation	Номер плавки Heat #	Номер партії Inspection Lot #	Розміри Dimensions: Діаметр OD мм mm	Товщина стінки WT мм mm	Довжина length м m	Загальна довжина Total length м m	шт piece	Фактична вага Actual weight: брутто gross кг kg	нетто net кг kg
1.	22-VR2-05966	6	1220574	673	273.0	6.35	11.60-11.80	58,57	5	2 533	2 528
2.	22-VR2-05967	6	1220574	673	273.0	6.35	11.60-11.80	23,43	2	1 017	1 012
3.	22-VR2-05968	6	1220575	672	273.0	6.35	11.60-11.80	58,67	5	2 531	2 526
4.	22-VR2-05969	6	1220575	672	273.0	6.35	11.60-11.80	58,69	5	2 526	2 521
5.	22-VR2-05970	6	1220574	673	273.0	6.35	11.60-11.80	58,66	5	2 536	2 531
6.	22-VR2-05971	6	1220574	673	273.0	6.35	11.60-11.80	11,76	1	511	510
7.	22-VR2-05972	6	1220574	673	273.0	6.35	11.60-11.80	58,61	5	2 538	2 533
8.	22-VR2-05973	6	1220574	673	273.0	6.35	11.60-11.80	11,75	1	507	506
9.	22-VR2-05974	6	1220574	673	273.0	6.35	11.60-11.80	58,64	5	2 536	2 531
10.	22-VR2-05975	6	1220574	673	273.0	6.35	11.60-11.80	58,68	5	2 539	2 534
11.	22-VR2-05976	6	1220575	672	273.0	6.35	11.60-11.80	23,49	2	1 010	1 005
12.	22-VR2-05977	6	1220575	672	273.0	6.35	11.60-11.80	58,64	5	2 512	2 507
13.	22-VR2-05978	6	1220575	672	273.0	6.35	11.60-11.80	23,48	2	1 008	1 003
14.	22-VR2-05980	6	1220575	672	273.0	6.35	11.60-11.80	11,73	1	499	498
	NPS 10		**Sch 20**				**TOTAL/РАЗОМ**	**574,80**	**49**	**24 803**	**24 745**
							BUNDLES/ПАКУНКІВ 14				

INTERPIPE

LIMITED LIABILITY COMPANY «INTERPIPE NIKO TUBE»
Legal address: Trubnykiv ave, 56 Nikopol, Ukraine, 53200
Facility address: Trubnykiv ave, 56 Nikopol, Ukraine, 53200

CTA Group	Kg 1014	Mt 23,54	Pz No.: 2
This document is reproduced by a computerized system and is conform to the original	Heat No.: 1220574	Cta's job: LC0001012	Date: 16/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000995 123A90A		Item: 40

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 0001/П
INSPECTION CERTIFICATE № 0001/П

Аркуш 1 Sheet Аркушів 1 Sheets

Хімічний склад за сертифікатними даними на заготівку та результати контролю хімічного складу металу труб
Heat analysis acc, to the billet manufacturer certificate & results of chemical analysis of pipes

Номер плавки Heat #	Номер партії Lot #	Лабораторія Laboratory	Хімічний склад Chemical composition % C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Alкисл x1000	B x1000	CE x100	Завод виробник заготовки Steel supplier
min			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
max			23	-	-	-	-	-	-	-	-	-	-	-	-	-	43	
1220575		DneprSteel	17	99	20	4	14	9	11	19	16	3	3	2	27	0.3	36	"MP"DNEPROSTEEL"LLC
		NIKOTUBE*	18	98	20	3	13	9	11	19	17	5	1	1	29	0.3	38	"Дніпросталь"
		NIKOTUBE*	18	97	19	3	13	9	10	18	17	5	1	1	28	0.3	38	
1220574		DneprSteel	17	98	21	4	14	8	11	19	16	4	2	2	24	0.3	37	"MP"DNEPROSTEEL"LLC
		NIKOTUBE*	17	99	23	4	13	8	11	18	17	6	1	1	30	0.2	37	"Дніпросталь"
		NIKOTUBE*	17	98	23	4	13	8	11	17	17	6	1	1	30	0.3	37	

Аналіз плавки згідно сертифікату заводу-виробника /*- контрольний аналіз від труб.
Сталь вироблена методом плавлення в печі електродуги з подальшим безперервним розливанням. Сталь що повністю розкислює. Адреса заводу виробника заготовки: Україна, 49051, г.Дніпро, вул. Дніпросталевська, 4.Steel has been produced by the EAF with continuous casting process. Steel is fully killed .The address of steel supplier: Ukraine,49051, Dnipro, 4 Dniprostalivska str.
При розрахунку вуглецевого еквіваленту використана формула:/When calculating the carbon equivalent the following formula was used:
CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

Результати випробувань труб - Test results for pipes

Механічні властивості Mechanical Properties

Номер плавки Heat#	Номер партії Lot#	Випробування на розтягнення Tensile test: Межа міцності Tensile strength	Межа плинності Rt0.5 Yield strength Rt0.5	Відносне подовження Elongation	Ставлення σт/σв Ratio σт/σв	Орієнтація зразка Specimens orientation*	Ширина смугового зразка Width of strip specimen	Діаметр циліндричного зразка Diameter of cylindrical specimen	Довжина зразка Length of specimen	Твердість Hardness Середнє значення Average HRB	HRC	Випробування на удар /Impact test: Орієнтація* Orientation*	Тип надрізання,температура Type of notch, temperature	Норматив/Norm	Середнє значення Average	В'язка складова Shear area	Розмір зразків** Specimens size**
		MPa	MPa	%			мм/ mm	мм/ mm	мм/ mm	HRB	HRC				Дж/J	%	мм/ mm
		min 415	240	-	-					-	-			min			
		max -	-	-	-					100	22						
1220575	672	515	339	35.0		L	38.1		50	78 80 80 av.79.3	<22	L	KV -48°C	27	42 46 41 av.43		10x5
		525	390	36.0		L	38.1		50								
1220574	673	515	370	37.0		L	38.1		50	78 80 79 av.79	<22	L	KV -48°C	27	35 31 47 av.38		10x5
		520	365	33.0		L	38.1		50								

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen
** Результати випробувань зменшених зразків перераховані на повноrозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

Інші види контролю/ Other tests

Вид випробування/ Type of test	Параметри/ Criteria	Результати контролю/Test results
Сплющування/ Flattening test	Труби пройшли випробування на сплющування./Pipes passed flattening test.	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic test	100% / 7,0 MPa / 10 сек.	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-destructive inspection full length body	Метод контролю:/Method:/Магнітоіндукційний контроль:/Magnetic flux leakage inspection:/Поздовжня риска 10% на зовнішній і внутрішній поверхні ./Longitudinal notch with depth 10% on external and internal surface .	Задовільно / Satisfactory
Візуальний контроль/ Visual inspection	За стандартом / As per Standard	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspection	За стандартом./As per Standard.	Задовільно / Satisfactory

Стан постачання/ Delivery condition

Загальні умови/ General condition	Труби виготовлені і випробувані відповідно до вимог ASTM A333/A333M-2018/ ASME SA333/SA333M-2018 і замовлення / Pipes were produced and inspected according to requirements of ASTM A333/A333M-2018/ ASME SA333/SA333M-2018 and order's requirements
Стан постачання/ Delivery condition	Нормалізація з прокатного нагріву./Normalized by rolling heat.
Кольорове кодування/ Color coding	Наносити на кожну трубу поздовжню смугу по всій довжині шириною 12мм. Колір фарби – яскраво-зелений.
Покриття/ Coating	Труби покриті лаком./Pipes are coated with varnish.
Маркування фарбою/ Marking paint	(Логотип полный) ASTM A333/A333M/ASME SA333/SA333M 10.750 0.250 6 HF SMLS (HEAT) (длина в футах до десятой фута) NPS 10 SCH 20 LT -50F (Тип покрытия)
Фаска (якщо потрібно)/ Bevelled ends if required	Фаска за стандартом ASME B16.25 рис. 2а./Bevelled ends as per ASME B16.25 Fig 2a.
Захист кінців/ Protection of pipe ends	Кінці труб оснащені пластиковими ковпачками./ The ends of pipes are equipped by plastic caps.
Додаткова інформація/ Additional information	Вага фактична./ Actual weight. Сталь спокійна дрібнозерниста./Steel is fully Killed and made to fine grain practice. Твердість відповідає вимогам NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB) /Hardness meets the requirements NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB).

Країна походження: Україна Country of origin: Ukraine.
Ваші пропозиції щодо поліпшення продукції просимо направляти на ел.адрес/ Please send Your proposals for improving the product by e-mail or fax or by phone
info@nstp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379.
e-mail: info@ae.interpipe.biz. Phone: +97148857411 Fax: +97148857412
Цей інспекційний сертифікат належить тільки до перерахованої в ньому продукції.Неприпустимо внесення змін або інша неправомірне використання сертифіката.This inspection certificate is only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution
Інспекційний сертифікат сформовано та перевірено контролером сертифікатором Третяк Т.С.
/Inspection Certificate was drawn up and checked by the Certificate Inspector Tretjak T.S.

Дата: 02.05.2022
Date:

Підпис інспектора 3-ї сторони :
Signature of 3-rd Part Inspector

Підпис ВТК
Signatures QCD

ТОВ "ІНТЕРПАЙП НТЗ ТЬОБ" 1 СЛУЖБА ЯКОСТІ М. НІКОПОЛЬ

INTERPIPE NIKO TUBE E5

ІНТЕРПАЙП НІКО ТЬЮБ

ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ «ІНТЕРПАЙП НІКО ТЬЮБ»
Юридична адреса : пр.Трубників, 56, м. Нікополь, Україна, 53200
Адреса виробництва : пр.Трубників, 56, м. Нікополь, Україна, 53200
Контактна інформація: +38(0566) 63-01-33, www.interpipe.biz

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 0001/П
INSPECTION CERTIFICATE № 0001/П

Вантажоодержувач / BUYER: EN GTP SPA Entrep. Natio. Grands Travaux Petroliers Z.I. doReghaia BP 09 - ALGER – 16000 ALGERIE Viale Lidice,40, 10095 Grugliasco (TO), ITALY

Контракт № / Contract #: MEO21/0298

Заводське замовлення № / Production order #: 009417

Країна / Country: Algeria

Транспортний засіб / Vehicle №:

Дата / Date: 02.05.2022г.

Аркуш / Sheet: 1 Аркушів / Sheets: 1

Найменування та код товару / Description and code of goods	Найменування стандартів / Specifications	Клас постачання / Class of delivery	Тип різьблення / Thread type
Трубы стальные бесшовные горячекатаные для трубопроводов / Seamless steel hot-rolled pipes for pipelines	ASTM A333/A333M-2018/ ASME SA333/SA333M-2019		

№ поз. / Item No	Номер пакунка / Bundle #	Марка сталі / Grade: Коротке позначення / Brief Designation	Номер плавки / Heat #	Номер партії / Inspection Lot #	Розміри / Dimensions: Діаметр / OD, дюйм / inch	Товщина стінки / WT, дюйм / inch	Довжина / length, фут / ft	Загальна довжина / Total length, фут / ft	шт / piece	Фактична вага / Actual weight: брутто / gross, фунт / lb	нетто / net, фунт / lb
1.	22-VR2-05966	6	1220574	673	10.750	0.250	38.1-38.7	192.2	5	5584.3	5573.3
2.	22-VR2-05967	6	1220574	673	10.750	0.250	38.1-38.7	76.9	2	2242.1	2231.1
3.	22-VR2-05968	6	1220575	672	10.750	0.250	38.1-38.7	192.5	5	5579.9	5568.9
4.	22-VR2-05969	6	1220575	672	10.750	0.250	38.1-38.7	192.6	5	5568.9	5557.8
5.	22-VR2-05970	6	1220574	673	10.750	0.250	38.1-38.7	192.5	5	5590.9	5579.9
6.	22-VR2-05971	6	1220574	673	10.750	0.250	38.1-38.7	38.6	1	1126.6	1124.4
7.	22-VR2-05972	6	1220574	673	10.750	0.250	38.1-38.7	192.3	5	5595.3	5584.3
8.	22-VR2-05973	6	1220574	673	10.750	0.250	38.1-38.7	38.5	1	1117.7	1115.5
9.	22-VR2-05974	6	1220574	673	10.750	0.250	38.1-38.7	192.4	5	5590.9	5579.9
10.	22-VR2-05975	6	1220574	673	10.750	0.250	38.1-38.7	192.5	5	5597.5	5586.5
11.	22-VR2-05976	6	1220575	672	10.750	0.250	38.1-38.7	77.1	2	2226.7	2215.6
12.	22-VR2-05977	6	1220575	672	10.750	0.250	38.1-38.7	192.4	5	5538.0	5527.0
13.	22-VR2-05978	6	1220575	672	10.750	0.250	38.1-38.7	77.0	2	2222.3	2211.2
14.	22-VR2-05980	6	1220575	672	10.750	0.250	38.1-38.7	38.5	1	1100.1	1097.9
	NPS 10		Sch 20				TOTAL/РАЗОМ	1886.0	49	54681.2	54553.3
							BUNDLES/ПАКУНКІВ 14				

INTERPIPE

LIMITED LIABILITY COMPANY «INTERPIPE NIKO TUBE»
Legal address: Trubnykiv ave, 56 Nikopol, Ukraine, 53200
Facility address: Trubnykiv ave, 56 Nikopol, Ukraine, 53200

CTA Group	Kg 1014	Mt 23,54	Pz No.: 2
This document is reproduced by a computerized system and is conform to the original	Heat No.: 1220574	Cta's job: LC0001012	Date: 16/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000995 123A90A		Item: 40

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 0001/П
INSPECTION CERTIFICATE № 0001/П

Аркуш 1 Sheet | Аркушів 1 Sheets

Хімічний склад за сертифікатними даними на заготівку та результати контролю хімічного складу металу труб
Heat analysis acc, to the billet manufacturer certificate & results of chemical analysis of pipes

Номер плавки Heat #	Номер партії Lot #	Лабораторія Laboratory	Хімічний склад Chemical composition %															Завод виробник заготовки Steel supplier
			C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al заг x1000	B x1000	CE x100	
min			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
max			23	-	-	-	-	-	-	-	-	-	-	-	-	-	43	
1220575		DneprSteel	17	99	20	4	14	9	11	19	16	3	3	2	27	0.3	38	"MP"DNEPROSTEEL"LLC
		NIKOTUBE*	18	98	20	3	13	9	11	19	17	5	1	1	29	0.3	38	"Дніпросталь"
		NIKOTUBE*	18	97	19	3	13	9	10	18	17	5	1	1	28	0.3	38	
1220574		DneprSteel	17	98	21	4	14	8	11	19	16	4	2	2	24	0.3	37	"MP"DNEPROSTEEL"LLC
		NIKOTUBE*	17	99	23	4	13	8	11	18	17	6	1	1	30	0.2	37	"Дніпросталь"
		NIKOTUBE*	17	98	23	4	13	8	11	17	17	6	1	1	30	0.3	37	

Аналіз плавки згідно сертифікату заводу-виробника /*- контрольний аналіз від труб.
Сталь вироблена методом плавлення в печі електродуги з подальшим безперервним розливанням. Сталь що повністю розкислює. Адреса заводу виробника заготовки: Україна, 49051, г.Дніпро, вул. Дніпросталевська, 4.Steel has been produced by the EAF with continuous casting process. Steel is fully killed .The address of steel supplier: Ukraine,49051, Dnipro, 4 Dniprostalivska str.
При розрахунку вуглецевого еквіваленту використана формула:/When calculating the carbon equivalent the following formula was used:
CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

Результати випробувань труб - Test results for pipes

Номер плавки Heat#	Номер партії Lot#	Механічні властивості Mechanical Properties: Випробування на розтягнення Tensile test: Межа міцності Tensile strength	Межа плинності Rt0,5 Yield strength Rt0,5	Відносне подовження Elongation	Ставлення отсів Ratio отсів	Орієнтація зразка Specimens orientation*	Ширина смугового зразка Width of strip specimen	Діаметр циліндричного зразка Diameter of cylindrical specimen	Довжина зразка Length of specimen	Твердість Hardness Середнє значення Average		Випробування на удар /Impact test: Орієнтація* Orientation*	Тип надрізання,температура Type of notch, temperature	Норматив/Norm	Середнє значення Average	В 'язка складова Shear area	Розмір зразків** Specimens size **
		PSI	PSI	%			дюйм/ inch	дюйм/ inch	дюйм/ inch	HRB	HRC			min	фут/фунт/ft/lb	%	дюйм/ Inch
		min 60000	35000	-	-					-	-						
		max -	-	-	-					100	22						
1220575	672	74500	49200	35.0		L	1.500		1.970	78 80 80 av.79.3	<22	L	KV -54°F	20	31 34 30 av.31.7		0.394x0.197
		76000	56500	36.0		L	1.500		1.970								
1220574	673	74500	53500	37.0		L	1.500		1.970	78 80 79 av.79	<22	L	KV -54°F	20	26 23 35 av.28		0.394x0.197
		75500	53000	33.0		L	1.500		1.970								

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

Інші види контролю/ Other tests

Вид випробування/ Type of test	Параметри/ Criteria	Результати контролю/Test results
Сплющування/ Flattening test	Труби пройшли випробування на сплющування./Pipes passed flattening test.	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic test	100% / 7,0 MPa / 10 сек.	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-destructive inspection full length body	Метод контролю:/Method:/Магнітоіндукційний контроль:/Magnetic flux leakage inspection:/Поздовжня риска 10% на зовнішній і внутрішній поверхні ./Longitudinal notch with depth 10% on external and internal surface .	Задовільно / Satisfactory
Візуальний контроль/ Visual inspection	За стандартом / As per Standard	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspection	За стандартом./As per Standard.	Задовільно / Satisfactory

Стан постачання/ Delivery condition

Загальні умови/ General condition	Труби виготовлені і випробувані відповідно до вимог ASTM A333/A333M-2018/ ASME SA333/SA333M-2019 і замовлення / Pipes were produced and inspected according to requirements of ASTM A333/A333M-2018/ ASME SA333/SA333M-2019 and order's requirements
Стан постачання/ Delivery condition	Нормалізація з прокатного нагріву./Normalized by rolling heat.
Кольорове кодування/ Color coding	Наносити на кожну трубу поздовжню смугу по всій довжині шириною 12мм, Колір фарби – яскраво-зелений.
Покриття/ Coating	Труби покриті лаком./Pipes are coated with varnish.
Маркування фарбою/ Marking paint	{Логотип полный} ASTM A333/A333M/ASME SA333/SA333M 10.750 0.250 8 HF SMLS {HEAT} {длина в футах до десятой фута} NPS 10 SCH 20 LT -50F {Тип покрытия}
Фаска (якщо потрібно)/ Bevelled ends if required	Фаска за стандартом ASME B16.25 рис. 2а./Bevelled ends as per ASME B16.25 Fig 2a.
Захист кінців/ Protection of pipe ends	Кінці труб оснащені пластиковими ковпачками./ The ends of pipes are equipped by plastic caps.
Додаткова інформація/ Additional information	Вага фактична./ Actual weight. Сталь спокійна дрібнозерниста./Steel is fully Killed and made to fine grain practice. Твердість відповідає вимогам NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC(100HRB)/Hardness meets the requirements NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB).

Країна походження: Україна Country of origin: Ukraine.
Ваші пропозиції щодо поліпшення продукції просимо направляти на ел.адрес/ Please send Your proposals for improving the product by e-mail or fax or by phone
info@nsto.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379.
e-mail: info@ae.interpipe.biz, Phone: +97148857411 Fax: +97148857412
Цей інспекційний сертифікат належить тільки до перераховної в ньому продукції.Неприпустимо внесення змін або інше неправомірне використання сертифіката.This inspection certificate is only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to
Інспекційний сертифікат сформовано та перевірено контролером сертифікатором Третяк Т.С.
/Inspection Certificate was drawn up and checked by the Certificate Inspector Tretiak T.S.

Дата: 02.05.2022 Підпис інспектора 3-ї сторони: Підпис ВТК
Data: Signature of 3-rd Part Inspector: Signatures QCD

CTA Group	Kg 1014	Mt 23,54	Pz No.: 2
This document is reproduced by a computerized system and is conform to the original	Heat No.: 1220574	Cta's job: LC0001012	Date: 16/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000995 123A90A		Item: 40

ІНТЕРПАЙП
НІКО ТЬЮБ

ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ «ІНТЕРПАЙП НІКО ТЬЮБ»
Юридична адреса : пр.Трубників, 56, м. Нікополь, Україна, 53200
Адреса виробництва : пр.Трубників, 56, м. Нікополь, Україна, 53200
Контактна інформація: +38(0566) 63-01-33, www.interpipe.biz

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 0001/БП
INSPECTION CERTIFICATE № 0001/БП
EN 10204-2004/3.2

Вантажоодержувач / BUYER: EN GTP SPA Entrep. Natio. Grands Travaux Petroliers Z.I. deReghaia BP 09 - ALGER – 16000 ALGERIE

Контракт № / Contract #: MEO21/0298

Заводське замовлення № / Production order #: 009417

Країна / Country: Algeria

Транспортний засіб / Vehicle №:

Дата / Date: 02.05.2022г.

Аркуш 1 / Sheet — Аркушів 1 / Sheets

Найменування та код товару / Description and code of goods	Найменування стандартів / Specifications	Клас постачання / Class of delivery	Тип різьблення / Thread type
Трубы стальные бесшовные горячекатаные для трубопроводов Seamless steel hot-rolled pipes for pipelines	ASTM A333/A333M-2018/ ASME SA333/SA333M-2019		

№ поз. / Item No	Номер пакунка / Bundle #	Марка сталі / Grade: Коротке позначення / Brief Designation	Номер плавки / Heat #	Номер партії / Inspection Lot #	Розміри / Dimensions: Діаметр / OD, мм / mm	Товщина стінки / WT, мм / mm	Довжина / length, м / m	Загальна довжина / Total length, м / m	шт / piece	Фактична вага / Actual weight: брутто / gross, кг / kg	нетто / net, кг / kg
1.	22-VR2-05981	6	1220575	672	273.0	6.35	11.60-11.80	11,73	1	509	508
	NPS 10		Sch 20			TOTAL/РАЗОМ		11,73	1	509	508

BUNDLES/ПАКУНКІВ 1

INTERPIPE
NIKO TUBE

LIMITED LIABILITY COMPANY «INTERPIPE NIKO TUBE»
Legal address: Trubnykiv ave, 56 Nikopol, Ukraine, 53200
Facility address: Trubnykiv ave, 56 Nikopol, Ukraine, 53200

CTA Group	Kg 1014	Mt 23,54	Pz No.: 2
This document is reproduced by a computerized system and is conform to the original	Heat No.: 1220574	Cta's job: LC0001012	Date: 16/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000995 123A90A		Item: 40

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 0001/БП
INSPECTION CERTIFICATE № 0001/БП

Аркуш 1 Sheet | Аркушів 1 Sheets

Хімічний склад за сертифікатними даними на заготівку та результати контролю хімічного складу металу труб
Heat analysis acc, to the billet manufacturer certificate & results of chemical analysis of pipes

Номер плавки Heat #	Номер партії Lot #	Лабораторія Laboratory	Хімічний склад Chemical composition % C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Alмы x1000	B x1000	CE x100	Завод виробник заготовки Steel supplier
min			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
max			23	-	-	-	-	-	-	-	-	-	-	-	-	-	43	
1220575		DniprSteel	17	99	20	4	14	9	11	19	16	3	3	2	27	0.3	38	"MP"ONEPROSTEEL"LLC
		NIKOTUBE*	18	98	20	3	13	9	11	19	17	5	1	1	29	0.3	38	"Дніпросталь"
		NIKOTUBE*	18	97	19	3	13	9	10	18	17	5	1	1	28	0.3	38	

Аналіз плавки згідно сертифікату заводу-виробника /* - контрольний аналіз від труб.
Сталь вироблена методом плавлення в печі електродуги з подальшим безперервним розливанням. Сталь що повністю розкислює. Адреса заводу виробника заготовки: Україна, 49051, г.Дніпро, вул. Дніпростапевська, 4.Steel has been produced by the EAF with continuous casting process. Steel is fully killed .The address of steel supplier: Ukraine,49051, Dnipro, 4 Dniprostalivska str.
При розрахунку вуглецевого еквіваленту використана формула:When calculating the carbon equivalent the following formula was used:
CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

Результати випробувань труб - Test results for pipes

Номер плавки Heat#	Номер партії Lot#	Механічні властивості Mechanical Properties: Випробування на розтягнення Tensile test: Межа міцності Tensile strength	Межа плинності Rt0,5 Yield strength Rt0,5	Відносне подовження Elongation	Ставлення опор Ratio опор	Орієнтація зразка Specimens orientation*	Ширина смугового зразка Width of strip specimen	Діаметр циліндричного зразка Diameter of cylindrical specimen	Довжина зразка Length of specimen	Твердість Hardness Середнє значення Average		Випробування на удар /Impact test: Орієнтація*	Тип надрізання,температура Type of notch, temperature	Норматив/Norm	Середнє значення Average	В 'язка складова Shear area	Розмір зразка** Specimens size **
		MPa	MPa	%	-		мм/ mm	мм/ mm	мм/ mm	HRB - 100	HRC - 22			min	Дж/J	%	мм/ mm
	min	415	240	-	-												
	max	-	-	-													
1220575	672	515	339	35.0		L	38.1		50	78 80 80 av.79.3	<22	L	KV -48°C	27	42 46 41 av.43		10x5
		525	390	36.0		L	38.1		50								

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

Інші види контролю/ Other tests

Вид випробування/ Type of test	Параметри/ Criteria	Результати контролю/Test results
Сплющування/ Flattening test	Труби пройшли випробування на сплющування./Pipes passed flattening test.	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic test	100% / 7,0 MPa / 10 сек.	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-destructive inspection full length body	Метод контролю:/Method:/Магнітоіндукційний контроль:/Magnetic flux leakage inspection:/Поздовжня риска 12,5% на зовнішній і внутрішній поверхні ./Longitudinal notch with depth 12,5% on external and internal surface .	Задовільно / Satisfactory
Візуальний контроль/ Visual inspection	За стандартом / As per Standard	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspection	За стандартом./As per Standard.	Задовільно / Satisfactory

Стан постачання/ Delivery condition

Загальні умови/ General condition	Труби виготовлені і випробувані відповідно до вимог ASTM A333/A333M-2018/ ASME SA333/SA333M-2019 і замовлення / Pipes were produced and inspected according to requirements of ASTM A333/A333M-2018/ ASME SA333/SA333M-2019 and order's requirements
Стан постачання/ Delivery condition	Нормалізація з прокатного нагріву./Normalized by rolling heat.
Кольорове кодування/ Color coding	Наносити на кожну трубу поздовжню смугу по всій довжині шириною 12мм. Колір фарби – яскраво-зелений.
Покриття/ Coating	Труби покриті лаком./Pipes are coated with varnish.
Маркування фарбою/ Marking paint	{Логотип полный} ASTM A333/A333M/ASME SA333/SA333M 10.750 0.250 6 HF SMLS {HEAT} {длина в футах до десятой фута} NPS 10 SCH 20 LT -50F {Тип покрытия}
Фаска (якщо потрібно)/ Bevelled ends if required	Фаска за стандартом ASME B16.25 рис. 2а./Bevelled ends as per ASME B16.25 Fig 2a.
Захист кінців/ Protection of pipe ends	Кінці труб оснащені пластиковими ковпачками./ The ends of pipes are equipped by plastic caps.
Додаткова інформація/ Additional information	Вага фактична./ Actual weight. Сталь спокійна дрібнозерниста./Steel is fully killed and made to fine grain practice. Твердість відповідає вимогам NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB)./Hardness meets the requirements NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB).

Країна походження: Україна Country of origin: Ukraine.
Ваші пропозиції щодо поліпшення продукції просимо направляти на ел.адрес/ Please send Your proposals for improving the product by e-mail or fax or by phone
info@nstp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379,
e-mail: info@ae.interpipe.biz. Phone: +97148857411 Fax: +97148857412
Цей Інспекційний сертифікат належить тільки до перелічованої в ньому продукції.Неприпустимо внесення змін або інше неправомірне використання сертифіката.This inspection certificate is only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution
Інспекційний сертифікат сформовано та перевірено контролером сертифікатором Шпак Т.А.
/Inspection Certificate was drawn up and checked by the Certificate Inspector Shpak T.A.
Дата: 02.05.2022
Date:

Підпис інспектора 3-ї сторони :
Signature of 3-rd Part Inspector

Підпис ВТК
Signatures OCD



ІНТЕРПАЙП НІКО ТЬЮБ

ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ «ІНТЕРПАЙП НІКО ТЬЮБ»
Юридична адреса : пр.Трубників, 56, м. Нікополь, Україна, 53200
Адреса виробництва : пр.Трубників, 56, м. Нікополь, Україна, 53200
Контактна інформація: +38(0566) 63-01-33, www.interpipe.biz

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 0001/БП
INSPECTION CERTIFICATE № 0001/БП
EN 10204-2004/3.2

Вантажоодержувач / BUYER: EN GTP SPA Entrep. Natio. Grands Travaux Petroliers Z.I. deReghaia BP 09 - ALGER – 16000 ALGERIE

Контракт № / Contract #: MEO21/0298

Заводське замовлення № / Production order #: 009417

Країна / Country: Algeria

Транспортний засіб / Vehicle №:

Дата / Date: 02.05.2022г.

Аркуш / Sheet: 1 Аркушів / Sheets: 1

Найменування та код товару / Description and code of goods	Найменування стандартів / Specifications	Клас постачання / Class of delivery	Тип різьблення / Thread type
Трубы стальные бесшовные горячекатаные для трубопроводов / Seamless steel hot-rolled pipes for pipelines	ASTM A333/A333M-2018/ ASME SA333/SA333M-2019		

№ поз. / Item No	Номер пакунка / Bundle #	Марка сталі / Grade: Коротке позначення / Brief Designation	Номер плавки / Heat #	Номер партії / Inspection Lot #	Розміри / Dimensions: Діаметр OD дюйм / inch	Товщина стінки WT дюйм / inch	Довжина length фут / ft	Загальна довжина / Total length фут / ft	шт / piece	Фактична вага / Actual weight: брутто / gross фунт / lb	нетто / net фунт / lb
1.	22-VR2-05981	6	1220575	672	10.750	0.250	38.1-38.7	38.5	1	1122.2	1119.9
	NPS 10		**Sch 20**			**TOTAL/РАЗОМ**		**38.5**	**1**	**1122.2**	**1119.9**
						BUNDLES/ПАКУНКІВ 1					

INTERPIPE NIKO TUBE

LIMITED LIABILITY COMPANY «INTERPIPE NIKO TUBE»
Legal address: Trubnykiv ave, 56 Nikopol, Ukraine, 53200
Facility address: Trubnykiv ave, 56 Nikopol, Ukraine, 53200

CTA Group	Kg 1014	Mt 23,54	Pz No.: 2
This document is reproduced by a computerized system and is conform to the original	Heat No.: 1220574	Cta's job: LC0001012	Date: 16/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000995 123A90A		Item: 40

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ № 0001/БП
INSPECTION CERTIFICATE № 0001/БП

Аркуш 1 Sheet Аркушів 1 Sheets

Хімічний склад за сертифікатними даними на заготівку та результати контролю хімічного складу металу труб
Heat analysis acc, to the billet manufacturer certificate & results of chemical analysis of pipes

Номер плавки Heat #	Номер партії Lot #	Лабораторія Laboratory	Хімічний склад Chemical composition % C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al$_{екв}$ x1000	B x1000	CE x100	Завод виробник заготовки Steel supplier
min			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
max			23	-	-	-	-	-	-	-	-	-	-	-	-	-	43	
1220575		DniprSteel	17	99	20	4	14	9	11	19	16	3	3	2	27	0.3	38	"MP"DNEPROSTEEL"LLC
		NIKOTUBE*	18	98	20	3	13	9	11	19	17	5	1	1	29	0.3	38	"Дніпросталь"
		NIKOTUBE*	16	97	19	3	13	9	10	18	17	5	1	1	28	0.3	38	

Аналіз плавки згідно сертифікату заводу-виробника /*- контрольний аналіз від труб.
Сталь вироблена методом плавлення в печі електродуги з подальшим безперервним розливанням. Сталь що повністю розкислює. Адреса заводу виробника заготовки: Україна, 49051, г.Дніпро, вул. Дніпростальвська, 4.Steel has been produced by the EAF with continuous casting process. Steel is fully killed .The address of steel supplier: Ukraine,49051, Dnipro, 4 Dniprostalivska str.
При розрахунку вуглецевого еквіваленту використана формула:/When calculating the carbon equivalent the following formula was used:
CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

Результати випробувань труб - Test results for pipes

Номер плавки Heat#	Номер партії Lot#	Механічні властивості Mechanical Properties: Випробування на розтягнення Tensile test: Межа міцності Tensile strength	Межа плинності Rt0.5 Yield strength Rt0.5	Відносне подовження Elongation	Ставлення стоєв Ratio стоєв	Орієнтація зразка Specimens orientation*	Ширина смугового зразка Width of strip specimen	Діаметр циліндричного зразка Diameter of cylindrical specimen	Довжина зразка Length of specimen	Твердість Hardness Середнє значення Average		Випробування на удар /Impact test: Орієнтація*	Тип надрізання, температура Type of notch, temperature	Норматив/Norm	Середнє значення Average	В'язка складова Shear area	Розмір зразків** Specimens size **
		PSI	PSI	%	-		дюйм/ Inch	дюйм/ inch	дюйм inch	HRB	HRC			mln	фут/фунт/ft/lb	%	дюйм/ Inch
	min	60000	35000	-	-					-	-						
	max	-	-	-	-					100	22						
1220575	672	74500	49200	35.0		L	1.500		1.970	78 80 80 av.79.3	<22	L	KV -54°F	20	31 34 30 av.31.7		0.394x0.197
		76000	56500	36.0		L	1.500		1.970								

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

Інші види контролю/ Other tests

Вид випробування/ Type of test	Параметри/ Criteria	Результати контролю/Test results
Сплющування/ Flattening test	Труби пройшли випробування на сплющування./Pipes passed flattening test.	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic test	100% / 7,0 MPa / 10 сек.	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-destructive inspection full length body	Метод контролю:/Method:/Магнітоіндукційний контроль:/Magnetic flux leakage inspection:/Поздовжня риска 12,5% на зовнішній і внутрішній поверхні ./Longitudinal notch with depth 12,5% on external and internal surface .	Задовільно / Satisfactory
Візуальний контроль/ Visual inspection	За стандартом / As per Standard	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspection	За стандартом./As per Standard.	Задовільно / Satisfactory

Стан постачання/ Delivery condition

Загальні умови/ General condition	Труби виготовлені і випробувані відповідно до вимог ASTM A333/A333M-2018/ ASME SA333/SA333M-2019 і замовлення / Pipes were produced and inspected according to requirements of ASTM A333/A333M-2018/ ASME SA333/SA333M-2019 and order's requirements
Стан постачання/ Delivery condition	Нормалізація з прокатного нагріву./Normalized by rolling heat.
Кольорове кодування/ Color coding	Наносити на кожну трубу поздовжню смугу по всій довжині шириною 12мм. Колір фарби – яскраво-зелений.
Покриття/ Coating	Труби покриті лаком./Pipes are coated with varnish.
Маркування фарбою/ Marking paint	{Логотип полный} ASTM A333/A333M/ASME SA333/SA333M 10.750 0.250 6 HF SMLS {HEAT} {длина в футах до десятой фута} NPS 10 SCH 20 LT -50F {Тип покрытия}
Фаска (якщо потрібно)/ Bevelled ends if required	Фаска за стандартом ASME B16.25 рис. 2а./Bevelled ends as per ASME B16.25 Fig 2a.
Захист кінців/ Protection of pipe ends	Кінці труб оснащені пластиковими ковпачками./ The ends of pipes are equipped by plastic caps.
Додаткова інформація/ Additional information	Вага фактична./ Actual weight. Сталь спокійна дрібнозерниста./Steel is fully Killed and made to fine grain practice. Твердість відповідає вимогам NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB)./Hardness meets the requirements NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB).

Країна походження: Україна Country of origin: Ukraine.
Ваші пропозиції щодо поліпшення продукції просимо направляти на ел.адресу/ Please send Your proposals for improving the product by e-mail or fax or by phone
Info@nsip.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379.
e-mail: Info@ae.interpipe.biz. Phone: +97148857411 Fax: +97148857412
Цей інспекційний сертифікат належить тільки до перерахованої в ньому продукції.Неприпустимо внесення змін або інше неправомірне використання сертифіката.This inspection certificate is only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution
Інспекційний сертифікат сформовано та перевірено контролером сертифікатором Шпак Т.А.
/Inspection Certificate was drawn up and checked by the Certificate Inspector Shpak T.A.
Дата: 02.05.2022
Date:

Підпис інспектора 3-ї сторони :
Signature of 3-rd Part Inspector:

Підпис ВТК
Signatures QCD



ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
ERREDI	1724001062	123A90	Q012403068

ROSETTI MARINO

ROSETTI MARINO
Conforme alla spec. PO
According to the spc.
TMUGF Firma / MTSMD Signature — Data / Date: 17/03/2025
Arno Baroni
☒ REVIEW
☐ WITNESS

CUSTOMER

NOTE

Contiene: C99 a seguito chiusura CRS ed approvazione RM.

Base Load Power Hub (BLPH)

AIR RELEASE VALVES

MANUFACTURERS RECORD BOOK (FINAL DOSSIER)

Document Number: 1724001062-QC-DB-00005

ROSETTI MARINO

1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign | Date

Rosetti Marino SpA Ravenna - Italy

Mar 17th 2025

Document Class: 2

Rev.	Date	Description	Prepared	Reviewed	Approved
02	17/02/2025	Accepted for Construction (AFC)	NA	LA	BV
01	12/12/2024	Accepted for Construction (AFC)	NA	LA	BV
00	29/11/2024	Issue for Review (IFR)	NA	LA	BV

ERRE DI

Comment Response Sheet Hollandse Kust Noord

CRS document name / Aconex unique number: 1724001062-QC-DB-00005-MANUFACTURERS RECORD BOOK (FINAL DOSSIER)-AIR RELEASE VALVES (ERREDI) CRS	
Reviewed Document(s) / Aconex unique number(s): ROSMA-INN-BPH-CER-00007 02 1724001062-QC-DB-00005-MANUFACTURERS RECORD BOOK (FINAL DOSSIER)-AIR RELEASE VALVES (ERREDI) **Reference Document(s) / Aconex unique numbers(s):**	
Interface information:	
Remarks on transmittal:	
Document review status (by Engineer / Engineer's Assistant(s)):	**CODE 1 - NO COMMENTS**

No.	Reference	Comment	Comment made by	Comment status
1.	Material Certificates	Clarify why the ERREDI Certificate According To: EN 10204/3.1 listing the components does not reflect the components on Drawing 1724001062-PP-DA-00003 Erredi reply: please clarify **Certificate of Conformity lists Body, Seat, Floater, Bolts/Nuts, Drawing 1724001062-PP-DA-00003 lists:** • **Body** • **Cover – Not included on CofC** • **Gasket Ball – Not included on CofC** • **D-Ring – Not included on CofC** • **Floater** **Erredi reply (17/02/2025): Cert. 3.1 added for Cover Seal perforated Plate; Cert.2.1 for gasket ball and O-Ring added.**	AGI	CLOSED
2.	Material Certificates	The following material certificates are missing: - Cover Seal Air Release 1" 150 - Screen Perf. Plate Erredi reply: The cover seal air release 1"150 mentioned in the dwg is the Seat Flange mentioned in the Cert. 3.1 (cert. n. MEST205328/2018) Screen Perf. Plate is not a pressure containing components, **if Screen Perf is metallic then it should have a minimum EN 10204:2.2 CERTIFICATE**	AGI	CLOSED

Comment Response Sheet Hollandse Kust Noord

No.	Reference	Comment	Comment made by	Comment status
		Erredi reply (17/02/2025): Cert. 3.1 added for Cover Seal perforated Plate; Cert.2.1 for gasket ball and O-Ring added.		
3.	Material Certificates	ERREDI Certificate According To: EN 10204/3.1 Floater Heat is missing – WHY? Erredi reply: the Heat number (541003) is specified in the 3.1 Cert. nr.92920-EN-1 **Why can't the CofC be updated to include Heat reference (541003)** **Erredi reply (17/02/2025): Floater Heat added**	AGI	CLOSED
4.	Material Certificates	ERREDI Certificate According To: EN 10204/3.1 Bolts/Nuts Heat is missing – WHY? Erredi reply: the Heat numbers of Bolts/Nuts is specified in the 3.1 Cert. nr. 1369660 **Why can't the CofC be updated to include Heat reference 1369660** **Erredi reply (17/02/2025): Bolts and Nuts Heats added**	AGI	CLOSED
5.	Material Certificates	ERREDI Certificate According To: EN 10204/3.1 details the Body is from Acciaierie Valbruna the material certificate 269108 details this is for forged bar – who did the machining for this body? Erredi reply: The machining has been executed internally (Erredi workshop)	AGI	CLOSED
6.	Material Certificates	ERREDI Certificate According To: EN 10204/3.1 details the Body, include the following records: - Manufacturer Details - Manufacturing Records - Dimensional Control Records – **Are ERREDI advising no dimensional verification was performed after machining at ERREDI?** - Post Machining NDE Records – **Are ERREDI advising no NDE was performed after machining at ERREDI?** - Inspection Reports – **Presumably if the answer to any of the above is YES then an inspection record or report is required** **Erredi reply (17/02/2025): the machining documents are internally documents that's why we not shared them. Please refer to FAT Certificate.**	AGI	CLOSED
7.	Material Certificates	ERREDI Certificate According To: EN 10204/3.1 details the Seat Flange is from Acciaierie Valbruna the material certificate 269108 details this is for forged bar – who did the machining for this body? Erredi reply: The machining has been executed internally (Erredi workshop)	AGI	CLOSED
8.	Material Certificates	ERREDI Certificate According To: EN 10204/3.1 details the Seat Flange is this the same item as Cover Seal?? Erredi reply: confirmed	AGI	CLOSED
9.	Material Certificates	ERREDI Certificate According To: EN 10204/3.1 details the Floater is Super Duplex Stainless Steel from OutoKumpo the material certificate is for Coil – who did the machining for this item? Erredi reply: The machining has been executed internally (Erredi warehouse)	AGI	CLOSED
10.	Material Certificates	ERREDI Certificate According To: EN 10204/3.1 details the Body, include the following records: - Manufacturer Details - Manufacturing Records	AGI	CLOSED

Comment Response Sheet Hollandse Kust Noord

No.	Reference	Comment	Comment made by	Comment status
		- Dimensional Control Records – Are ERREDI advising no dimensional verification was performed after machining at ERREDI? - Post Machining NDE Records – Are ERREDI advising no NDE was performed after machining at ERREDI? - Inspection Reports – Presumably if the answer to any of the above is YES then an inspection record or report is required Not applicable Erredi reply (17/02/2025): the machining documents are internally documents that's why we not shared them. Please refer to FAT Certificate.		
11.	General Comment	Where are the Blot Tensioning Records Erredi reply: it can be added into IOM MRB Index comment response sheet REPLY from ERREDI advised Torque Records would be included – WHY HAVE ERREDI NOW CHANGED THEIR MINDS Erredi reply (17/02/2025): Clamping Torque added in the IOM	AGI	CLOSED
12.	General Comment	Where are the spare parts Floater, Gasket and Bolting detained in this MRB document Erredi reply: Index approved without SPIR Expectation is ERREDI will now provide a separate MRB that incorporates the records for the SPARE PARTS Erredi reply (17/02/2025): Spare Parts Index Register added in the MRB Index and in the MRB.	AGI	CLOSED
13.	General Comment	Why isn't there an inspection release note (IRN) detailing - Valve Tag Numbers - Quantity - Spare Parts Erredi reply: please clarify PLEASE CLARIFY WHAT YOU DON'T UNDERSTAND ABOUT AN INSPECTION RELEASE NOTE (IRN) Erredi reply (17/02/2025): Inspection Release Note added in the MRB Index and in the MRB.	AGI	CLOSED
14.				
15.				

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724001267	123A90A	Q012400600

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani 26/07/2024

Sonia Emiliani

☒ REVIEW

☐ WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 26/07/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00006868
Packing list	PLPLIS202400006831
Ns. Rif.	00002823
Vs. Rif.	1724001267 - 24.06.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00006868

26/07/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*	Immagine *Image*
6	4	CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS	1023SA024	CT327#2024SA0#1023_001.TIF CT327#2024SA0#1023_2.0001.TIF CT327#2024SA0#1023_3.0001.TIF CT327#2024SA0#1023_4.0001.TIF CT327#2024SA0#1023_5.0001.TIF CT327#2024SA0#1023_6.0001.TIF CT327#2024SA0#1023_6.0002.TIF CT327#2024SA0#1023_7.0001.TIF CT327#2024SA0#1023_8.0001.TIF CT327#2024SA0#1023_9.0001.TIF
7	10	CURVE 90° LR 2" SCH.10/S SEAMLESS	M230234-1	CTCERT202400002971_1.0001.TIF
8	12	CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS	M230941	CTCERT202400004434_1.0001.TIF
9	1	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 3"	23/70747	CTCERT202400004887_1.0001.TIF CTCERT202400004887_2.0001.TIF
10	4	Flange WN ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 3" thk 5,49	23/70167	CTCERT202400004888_1.0001.TIF CTCERT202400004888_2.0001.TIF
11	2	W.N. 2" S.150 RF SCH.10/S	A506/23	CTCERT202400004571_1.0001.TIF CTCERT202400004571_1.0002.TIF
12	15	W.N. 2" S.300 RF SCH.10/S	DL010	CTCERT202400002386_1.0001.TIF
13	8	W.N. 1.1/2" S.300 RF SCH.40/S	CH-18895	CTCERT202300004259_1.0001.TIF
14	1	Flange WN For Jackscrews diam.3" Thk.5.49mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70167	CTCERT202400004889_1.0003.TIF CTCERT202400004889_2.0001.TIF
32	10	RID. CONC. 1"x3/4" SCH.40/S SEAMLESS	MR230609	CTCERT202400001912_1.0001.TIF
33	8	RID. CONC. 3"x2" SCH.10/S SEAMLESS	JO030-1	CTCERT202300004935_1.0001.TIF

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26/07/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
34	4	RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS	LN007-1 CTCERT202400003910_1.0001.TIF
35	1	RID. CONC. 4"x2" SCH.10/S SEAMLESS	J0043-1 CTCERT202200004155_1.TIF
38	1	RID. ECC. 2"x1.1/2" SCH.10S/40S SEAMLESS	MN086-1 CTCERT202400004042_1.0001.TIF
40	6	TEE RID. 4"x2" SCH.10/S SEAMLESS	MN094-1 CTCERT202400002681_1.0001.TIF
42	6	TEE RID. 6"x3" SCH.40S/10S SEAMLESS	M0070-1 CTCERT202400004669_1.0001.TIF

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00006868

26/07/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
6	NR	4	0.00	CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS	1023SA024
				RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
7	NR	10	0.00	CURVE 90° LR 2" SCH.10/S SEAMLESS	M230234-1
8	NR	12	0.00	CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS	M230941
				FLANGE IN ACCIAIO CALMATO ASTM A-350 GRADO LF2	
9	NR	1	0.00	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 3"	23/70747
10	NR	4	0.00	Flange WN ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 3" thk 5,49	23/70167

raccortubi

00006868

26/07/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				FLANGE IN ACCIAIO INOX ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	
11	NR	2	0.00	W.N. 2" S.150 RF SCH.10/S	A506/23
12	NR	15	0.00	W.N. 2" S.300 RF SCH.10/S	DL010
13	NR	8	0.00	W.N. 1.1/2" S.300 RF SCH.40/S	CH-18895
14	NR	1	0.00	Flange WN For Jackscrews diam.3" Thk.5.49mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70167
				RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
32	NR	10	0.00	RID. CONC. 1"x3/4" SCH.40/S SEAMLESS	MR230609
33	NR	8	0.00	RID. CONC. 3"x2" SCH.10/S SEAMLESS	JO030-1
34	NR	4	0.00	RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS	LN007-1

raccortubi

00006868

26/07/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
35	NR	1	0.00	RID. CONC. 4"x2" SCH.10/S SEAMLESS	J0043-1
38	NR	1	0.00	RID. ECC. 2"x1.1/2" SCH.10S/40S SEAMLESS	MN086-1
40	NR	6	0.00	TEE RID. 4"x2" SCH.10/S SEAMLESS	MN094-1
42	NR	6	0.00	TEE RID. 6"x3" SCH.40S/10S SEAMLESS	M0070-1

raccortubi

00006868

26/07/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
			RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
6	4	NR	CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS	1023SA024
			RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
7	10	NR	CURVE 90° LR 2" SCH.10/S SEAMLESS	M230234-1
8	12	NR	CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS	M230941
			FLANGE IN ACCIAIO INOX ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	
11	2	NR	W.N. 2" S.150 RF SCH.10/S	A506/23
12	15	NR	W.N. 2" S.300 RF SCH.10/S	DL010
13	8	NR	W.N. 1.1/2" S.300 RF SCH.40/S	CH-18895
			RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
32	10	NR	RID. CONC. 1"x3/4" SCH.40/S SEAMLESS	MR230609
33	8	NR	RID. CONC. 3"x2" SCH.10/S SEAMLESS	JO030-1

raccortubi

00006868

26/07/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
34		4 NR	RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS	LN007-1
35		1 NR	RID. CONC. 4"x2" SCH.10/S SEAMLESS	J0043-1
38		1 NR	RID. ECC. 2"x1.1/2" SCH.10S/40S SEAMLESS	MN086-1
40		6 NR	TEE RID. 4"x2" SCH.10/S SEAMLESS	MN094-1
42		6 NR	TEE RID. 6"x3" SCH.40S/10S SEAMLESS	M0070-1

raccortubi

Customer: ROSETTI MARINO S.p.A.

Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS

Heat num. or Pcs. marking: 1023SA024 - Qty:4.00

Order: 1724001267 - 24.06.24 - Item n.: 6 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY * Issued 26-07-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5
29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente / **Customer**: RACCORTUBI S.p.A.

Ordine N. / **P.O.N./C.**: Master plan Marzo 2024/2

Pos. N. / Item/Poste: 14 — **Q.tà** / Q.ty/Q.té: 158

(*) Marcatura e cert. N. / Material Marking e Cert. N.: 1023SA024

Created on: 12-03-2024

Descrizione / Description / Description: ELBOWS 90° LR 1.1/2" SCH.40/S SEAMLESS

Specifica / Specification / Spécification: BW FITTINGS TO ASME II Part.A SA/815M Ed.2023
ASTM A/815M-2023 UNS S32760
DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: TUBACEX Cert. No.: 715498
Raw material - manufacturer/Materiel du depart - fabriquant: SMLS PIPES TO ASTM A-790 UNS S32760
TUBACEX Cert. No.: 715498

Test produzione / Production test/Coupon de production

Caratteristiche meccaniche
Mechanical Properties/Caracteristiques Mechaniques

Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS	**Colata N.** Heat N. Couléè N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement 2"	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
QTR: 01/SDSS/A Rev.5 Specimens location drawing as per relevant QTR	57031	22/24	716	902	31.1	HRC<28	HRC 24	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Couléè N.	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**Mo**	**Cu**	**Nb**	**W**	**Co**	**N**	**PRE**	**FERRITE**
57031	0,011	0,230	0,52	0,019	0,0004	25,60	6,90	3,65	0,69	0,004	0,63	0,045	0,251	41.661	49.9

Prove
Tests/Tests

Prova di corrosione A262 Prat. E: Conforme
Corrosion Test A262 Pract. E: In conformity
Essais de corrosion A262 Prat. E: En Conformité

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/EU annex I para 4.3
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTORY
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262 Pr E
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.: 6215/24
- MATERIAL AND TESTS ACCORDING TO M-630 REV.7 - MDS D53 REV.6
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT WITH RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS ACC. TO ASTM A380
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication

Formato a freddo	**Senza saldatura**
Cold formed	Seamless
Formés à froid	Sans soudure

Ispezione
Inspection/inspéction
Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1130°C

Solution Annealing at 1130°C , water quenching

Hypertrempés à 1130°C

Heat treatment soaking time for 20 minutes, batch n. 0236

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
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Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

G48ACE 6215 / 24

Rif. Lab SIM (FCP) : **2023 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	ASTM A 815-23 UNS S32760

Prova di "pitting" in ferro-cloruro/ Ferric chloride pitting test [Decision rule: Qs]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimensioni/ Dimension mm			Area/ Area cm²	
					Lunghezza/ Length	Larghezza/ Width	Spessore/ Thickness		
32963	ASTM G48 – 11 (R2020)e1 Method A	RTX_D53 Rev.9	B L FT	Meccanica/ Mechanical	54,11	23,53	3,46	30.84	[(LxWx2)+(WxTx2)+(LxTx2)] / 100

Condizioni superficiali/ Surface condition	Lavorato/ Machined
Temperatura di prova/ Test temperature (°C)	50
Tempo di esposizione (ore)/ Exposure time (hours)	24

Data e ora inizio/ Initial date and time	Data e ora fine/ End date and time
18/03/2024 11:16:50	19/03/2024 11:16:50

Soluzione/ Solution FeCl3 6% SOLUTION

Peso iniziale/ Initial weight (g)	32,5083		
Peso finale/ Final weight (g)	32,508		
Perdita di peso/ Weigth loss (g)	0,0003		
Perdita di massa/ Specimen mass loss		0.1	g/m²
Limite perdita di massa max/ Limit Specimen mass loss max		**1.0**	**g/m²**

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X/ NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata/ Examined area cm² 25,46 (LxWx2)/100

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival	13/03/2024	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
Data Rapporto di prova/ Test Report Date	19/03/2024 firmato elettronicamente/electronically signed	Antonielli Stefano	Amani Paolo		

DECISION RULE:
- Ql → Qualitative
- Qs → Semi-quantitative
- Qu → Quantitative (Implicit Uncertainty)
- Qi → Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment. The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

raccortubi
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS
Heat num. or Pcs. marking: 1023SA024 - Qty:4,00
Order: 1724001267 - 24.06.24 - Item n.: 6 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000282
Protocol: CTCERC20240000686B * CERTIFIED TRUE COPY
* Issued 26-07-2024

raccortubi
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS
Heat num. or Pcs. marking: 1023SA024 - Qty:4,00
Order: 1724001267 - 24.06.24 - Item n.: 6 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002823
Protocol: CTCERC20240000686B * CERTIFIED TRUE COPY
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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

E562 6215 / 24

Rif. Lab SIM (FCP) : **2023 / 24 (A / A)**

ilac-MRA ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	**ASTM A 815-23 UNS S32760**

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti/ Determining volume fraction by systematic manual point count [Decision rule: Qn]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Ingrandimento/ Enlargement	Misura del reticolo/ Grid size	Data esecuzione/ Date of Testing
32959	ASTM E562 – 19e1	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	20% NaOH	500 X	Square 5 x 5 = 25 Points	19/03/2024

	Valore Min/ Value Min	Valore Max/ Value Max
Ferrite Vv (% Frazione di volume)/ Vv (% Volume Fraction) 49.9	**40**	**55**

s 3.4 95% C.I. 1.3 %RA 2.53

Ferrite % Frazione di volume per ciascun campo esaminato/ % Volume Fraction for each metallographic section

1	**46**	2	**48**	3	**48**	4	**54**	5	**50**
6	**52**	7	**48**	8	**54**	9	**54**	10	**48**
11	**50**	12	**50**	13	**46**	14	**46**	15	**54**
16	**42**	17	**46**	18	**48**	19	**54**	20	**48**
21	**52**	22	**46**	23	**54**	24	**50**	25	**54**
26	**52**	27	**54**	28	**48**	29	**48**	30	**54**

Nr. di campi per provino/sezione/spaziatura/angolo/ Nr. of fields for specimens/section/angle: 30 / 3.50 x 20 mm / 1 x 3.0 mm / 45°

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

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Data Ingresso Materiale/ Date of Material Arrival **13/03/2024**

Data Rapporto di prova/ Test Report Date **19/03/2024**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer

DECISION RULE:
- Ql → Qualitative
- Qs → Semi-quantitative
- Qn → Quantitative (Implicit Uncertainty)
- Qi → Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.

The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi
Heat num. or Pcs. marking: 1023SA024 - Qty:4,00
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS
Order: 1724001267 - 24.06.24 - Item n.: 6 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000282
Protocol: CTCERC20240000686 8 * CERTIFIED TRUE COPY
* Issued 26-07-2024

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Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

ANL 6215 / 24

Rif. Lab SIM (FCP) : **2023 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	ASTM A 815-23 UNS S32760

ANALISI SPETTROMETRICA AD EMISSIONE ATOMICA A SCINTILLA/ Spark Atomic Emission Spectrometry

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Temperatura di prova/ Test temperature (°C)	ID Gruppo/ Group ID	Unità di misura/ Unit of measure	Data esecuzione/ Date of Testing
32966	PO 04-145 RC R13:2024	RTX_D53 Rev.9	B / UP	20	10324	% by weight	18/03/2024

			Min.	Max.				Min.	Max.				Min.	Max.
C	0,012	±0,003		0.030	Nb					Fe				
Si	0,26	±0,02		1.00	Ti					Ca				
Mn	0,53	±0,03		2.00	W	0,65	±0,05	0,50	1.00	Ta				
P	0,020	±0,002		0.030	Pb					Sb				
S	0,004	±0,001		0.010	Sn					H				
Cr	25,8	±0,2	24,0	26.0	As					Cd				
V					B					Se				
Mo	3,7	±0,2	3,0	4,0	N	0,27	±0,02	0.20	0,30	Bi				
Ni	7,0	±0,4	6,0	8,0	La					Hg				
Cu	0,72	±0,06	0.50	1.00	Mg									
Ce					Zr									
Al					Zn									
Co					O									

FORMULAS			Min.	Max.
*PREN	42,33	±0,71	40.00	

Decision rule:
the result is "Compliant to Specification" when:
- *Result-U ≥ Lower Limit (<2,5 %PFA)*
- *Result+U ≤ Upper Limit (<2,5 %PFA)*
- *Result-U≥ Lower Limit and Result+U≤ Upper Limit (<5 %PFA)*

When the result falls within the uncertainty range at the limit value, the result is Not Compliant.
Where U is the Uncertainty and PFA is the Probability of False Accept (ILAC-G8:09/2019)

The symbol * before the element or formula indicates a value that is outside the Laboratory's accredited range for that element/formula.The symbol (!) means that the sensitivity of the instrument does not satisfy the required number of significant digits.
Expanded uncertainty above reported is based on standard uncertainty multiplied by a coverage factor k = 2 that corresponds to a coverage probability of about 95% for a normal distribution. The evaluation is based on EA 4/16 Ed. 2003

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./
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Data Ingresso Materiale/ Date of Material Arrival **13/03/2024**

Data Rapporto di prova/ Test Report Date **19/03/2024**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer

DECISION RULE:
- Ql — Qualitative
- Qs — Semi-quantitative
- Qn — Quantitative (Implicit Uncertainty)
- Qt — Quantitative (Not Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.

The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [/]-/; [B]-Specimen in Base Material; [UP]-external sup.

raccortubi

Customer: ROSETTI MARINO S.p.A.

Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS

Heat num. or Pcs. marking: 1023SA024 - Qty:4,00

Order: 1724001267 - 24.06.24 - Item n.: 6 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000823

Protocol: CTCERC20240000868 * CERTIFIED TRUE COPY * Issued 26-07-2024

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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

DUR 6215 / 24

Rif. Lab SIM (FCP) : **2023 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

Campione fornito da cliente/ Sample supplied by customer :

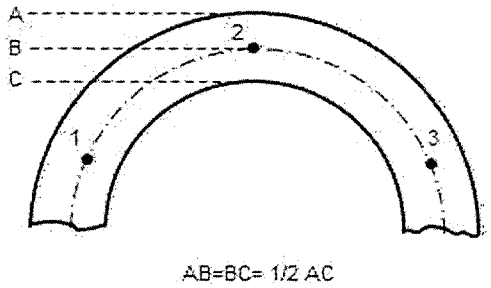
Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	ASTM A 815-23 UNS S32760

PROVA DI DUREZZA HV10 - HV30 - HV5/ HV10 - HV30 - HV5 hardness test [Decision rule: Qn]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position		Temp./ Temp.	Durezza/ Hardness	Data esecuzione/ Date of Testing
32958	ASTM E92 – 23 (only Vickers)	RTX_D53 Rev.9	B	T	20 °C	HV10	19/03/2024

(B1) - Base Material MAX 286

HV10	1	267	2	269	3	261



Position	Average	
(B1) - Base Material	266	HV10

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival **13/03/2024**

Data Rapporto di prova/ Test Report Date **19/03/2024**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer

DECISION RULE:
- Ql → Qualitative
- Qs → Semi-quantitative
- Qn → Quantitative (Implicit Uncertainty)
- Qi → Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.

The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [SZ]-along the thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 1023SA024 - Qty:4,00
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS
Order: 1724001267 - 24.06.24 - Item n.: 6 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000028823
Protocol: CTCERC20240000868 * CERTIFIED TRUE COPY
* Issued 26-07-2024

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

MIC 6215 / 24

Rif. Lab SIM (FCP) : **2023 / 24 (A / A)**

LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

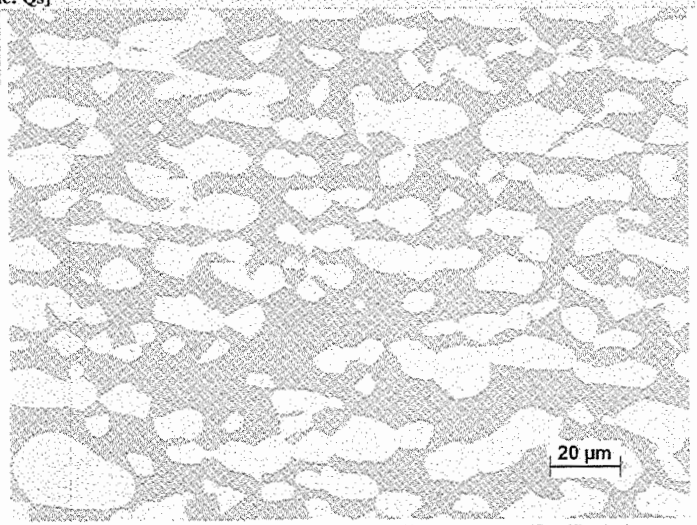
Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	ASTM A 815-23 UNS S32760

ESAME MICROGRAFICO/ Micrographic examination [Decision rule: Qs]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
32960	ASTM E3 – 11(R2017) / ASTM E407 – 23	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	19/03/2024

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	10% Oxalic	Specimen in Base Material 3.5 x 20.0 = 70.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da nitruri. / Structure free from nitrides.

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

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Data Ingresso Materiale/ Date of Material Arrival **13/03/2024**

Data Rapporto di prova/ Test Report Date **19/03/2024**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer

DECISION RULE:
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Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi
Heat num. or Pcs. marking: 1023SA024 - Qty:4,00
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS
Order: 1724001267 - 24.06.24 - Item n.: 6 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002823
Protocol: CTCERC20240000868 * CERTIFIED TRUE COPY
* Issued 26-07-2024

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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

MIC 6215 / 24

Rif. Lab SIM (FCP) : **2023 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

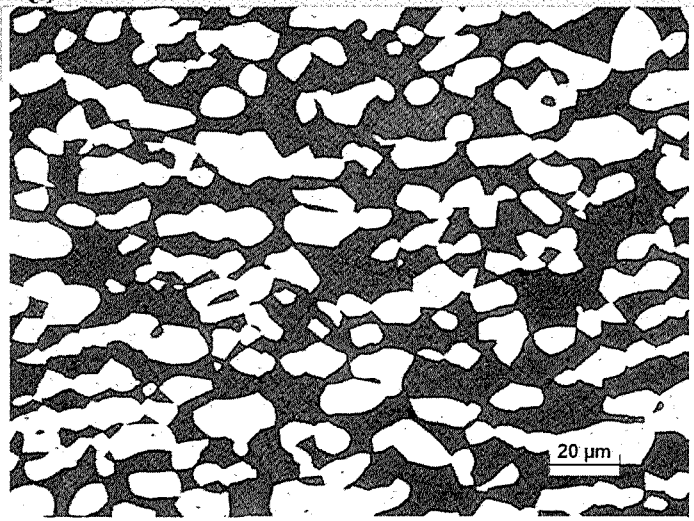
Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	ASTM A 815-23 UNS S32760

ESAME MICROGRAFICO/ Micrographic examination [Decision rule: Qs]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
32961	ASTM E3 – 11(R2017) / ASTM E407 – 23	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	19/03/2024

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	20% NaOH	Specimen in Base Material 3.5 x 20.0 = 70.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
13/03/2024				
Data Rapporto di prova/ Test Report Date 19/03/2024 firmato elettronicamente/electronically signed	Antonielli Stefano	Amani Paolo		

DECISION RULE:
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• Qn — Quantitative (Implicit Uncertainty)
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Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi
Heat num. or Pcs. marking: 1023SA024 - Qty:4.00
Protocol: CTCERC20240000868 * CERTIFIED TRUE COPY
* Issued 26-07-2024
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS
Order: 1724001267 - 24.06.24 - Item n.: 6 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000282

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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

A923A 6215 / 24

Rif. Lab SIM (FCP) : **2023 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order: **MASTER PLAN MARZO 2024/2**

Commessa/ Job: **31003/24 23/1495**

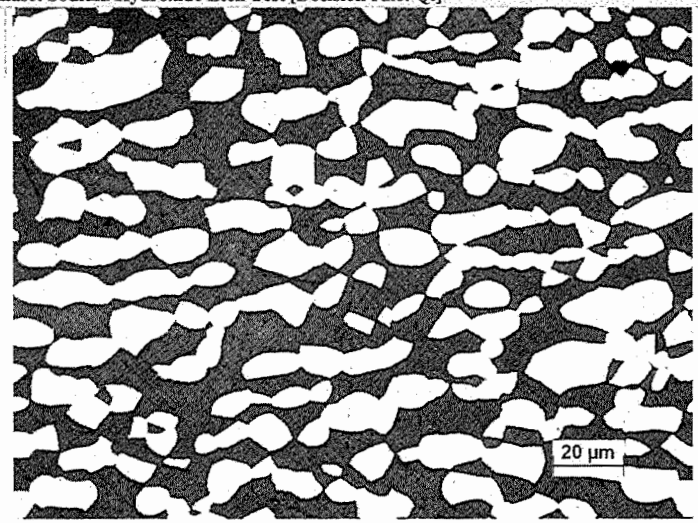
Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	ASTM A 815-23 UNS S32760

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio/ Detecting Detrimental Intermetallic Phase: Sodium Hydroxide Etch Test [Decision rule: QI]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
32965	ASTM A923 – 22 Method A	RTX_D53 Rev.9 + STATOIL -2010080 Rev.0	B T FT	19/03/2024

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	40g NaOH to 100g distilled water	Specimen in Base Material



Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure.

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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13/03/2024				
Data Rapporto di prova/ Test Report Date: 19/03/2024	Antonielli Stefano	Amani Paolo		

firmato elettronicamente/electronically signed

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Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS
Heat num. or Pcs. marking: 1023SA024 - Qty:4,00
Order: 1724001267 - 24.06.24 - Item n.: 6 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823
Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY
* Issued 26-07-2024

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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

A923C 6215 / 24

Rif. Lab SIM (FCP) : **2023 / 24 (A / A)**

ilac-MRA ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		22/24	57031	ASTM A 815-23 UNS S32760

Individuazione di fasi intermetalliche dannose: Prova di corrosione per "pitting" in cloruro ferrico/ Detecting Detrimental Intermetallic Phase: Ferric Chloride Pitting Corrosion Test [Decision rule: Qs]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimensioni/ Dimension mm Lunghezza/ Length	Larghezza/ Width	Spessore/ Thickness	Area/ Area cm²
32964	ASTM A923 – 22 Method C	RTX_D53 Rev.9	B L FT	Meccanica/ Mechanical	54,34	23,55	3,47	31

Condizioni superficiali/ Surface condition: Lavorato/ Machined

Temperatura di prova/ Test temperature (°C): 50

Temperatura Minima Rilevata/ Minimum temperature observed (°C): 49,73

Temperatura Massima Rilevata/ Maximum temperature observed (°C): 50,41

Tempo di esposizione (ore)/ Exposure time (hours): 24

Data inizio/ Initial date	Data fine/ End date
18/03/2024 13:28:14	19/03/2024 13:28:14

Soluzione/ Solution: FeCl3 6% SOLUTION

Peso iniziale/ Initial weight (g)	32,3744	
Peso finale/ Final weight (g)	32,3739	
Perdita di peso/ Weigth loss (g)	0,0005	
Perdita di massa/ Specimen mass loss	0.2	(g/m²)

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X/
NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Velocità di corrosione/ Corrosion speed (mg/(dm²*d)) **1,6**

Limite velocità di corrosione (mg/(dm²*d)) max/ Corrosion rate limit (mg/(dm²*d)) max **10.0**

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Ingresso Materiale/ Date of Material Arrival	13/03/2024	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
Data Rapporto di prova/ Test Report Date	19/03/2024	Antonielli Stefano	Amani Paolo		
	firmato elettronicamente/electronically signed				

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- Qu — Quantitative (Implicit Uncertainty)
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The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

raccortubi
Heat num. or Pcs. marking: 1023SA024 - Qty:4,00
Protocol: CTCERC20240000868 * CERTIFIED TRUE COPY
* Issued 26-07-2024
Customer: ROSETTI MARINO S.p.A.
Description: CURVE 90° LR 1.1/2" SCH.40/S SEAMLESS
Order: 1724001267 - 24.06.24 - Item n.: 6 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000282

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RAPPORTO DI PROVA/ TEST REPORT

PM 6215 / 24

Rif. Lab SIM (FCP) : **2023 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN MARZO 2024/2**

Commessa/ Job **31003/24 23/1495**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		**22/24**	**57031**	**ASTM A 815-23 UNS S32760**

PROVA DI TRAZIONE A TEMPERATURA AMBIENTE/ Tensile test at room temperature [Decision rule: Qn]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Dimensioni/ Dimension Wth mm	Ø / Width mm	ØPipe mm	Lo (mm)	Posizione di prelievo/ Test position	Temp./ Temp. °C	Snervamento/ Yield strength MPa		Rottura/ Tensile strength Rm MPa		Allungamento/ Elongation after fracture A (%)		Strizione/ Area Reduction Z (%)	S/R/ Ratio Yield strength / Tensile strength	Data esecuzione/ Date of Testing
32956	ASTM A370 – 23 §6÷14, § A1.3, § A2.2 and § A3.2	**Material Standard**	3,70	12,40		50,00	B L FT	23,0	(≥550)	Rp0,2% **716**		(≥750)	**902**	(≥25)	**31,1**			19/03/2024

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival **13/03/2024**

Data Rapporto di prova/ Test Report Date **19/03/2024**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer

DECISION RULE:
• Ql → Qualitative
• Qs → Semi-quantitative
• Qn → Quantitative (Implicit Uncertainty)
• Qk → Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment. The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

Customer: ROSETTI MARINO S.p.A.

Description: CURVE 90° LR 2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: M230234-1 - Qty:10,00

Order: 1724001267 - 24.06.24 - Item n.: 7 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002823

Protocol: CTCERC2024000068 68 * CERTIFIED TRUE COPY * Issued 26-07-2024

CTCERT2024000002971.1.0001

Cert. to EN 10204 / 3.1

INSPECTION CERTIFICATE

S.P. UNITED INDUSTRY SDN. BHD.

(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Date (日付) : JANUARY 31, 2024

Certificate No. : 24-01-0126
(書類番号)

LRQA CERTIFIED ISO 9001

Approval No:ISO9001-0048008
PED Cert No:0343/PED/MUM/101009/1

Order No. : 23SAN007

P.O. No. : 806739

Product (形状)	Product Specification (規格)	Specification for Raw Material (材料規格)
STAINLESS STEEL 90 DEG LONG RADIUS ELBOW (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 (ASME SEC II PART A) ASME B16.9-2018 / MSS SP-43-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*	Size (寸法)	Dimension in mm (寸法)		Lot No. (製造番号)	Quantity (数量)	Surface Inspection (外観検査)	Dimension Inspection (寸法検査)	S. P. I. Code No.	Manufacturing Method
		Outside Dia (外径)	Thickness (厚さ)						
1	FBBLR-S316L- 1½"x10S	48.26	2.77	M230731	300	GOOD	GOOD	24311500	COLD FORMED
X 2	FBBLR-S316L- 2"x10S	60.33	2.77	M230234-1	1000	GOOD	GOOD	24312000	COLD FORMED
3	FBBLR-S316L- 5"x10S	141.30	3.40	M230820	15	GOOD	GOOD	24315000	COLD FORMED
4	FBBLR-S316L- 5"x10S	141.30	3.40	M220523	2	GOOD	GOOD	24315000	COLD FORMED

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

		Chemical Composition of Raw Material % (化学成分) (材料)									Mechanical Properties of Raw Material (機械的性質)								
*	Raw Pipe Heat No. (溶解番号)	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100		Type of Specimen (試験片)	YS Mpa (耐力)	TS Mpa (引張強さ)	EL% (伸び) (GL:50mm)	EL% (伸び) Standard (規格値)	Flattening Test (へん平試験)	HT Mpa (水圧試験)	Hardness Test HRB	
1	230628AS08	1.9	45.1	89	34	1	1001	1649	201			253	593	52		GOOD	GOOD	78	
2	220729AT15	1.7	36.2	86	35	1	1005	1625	203			255	591	54		GOOD	GOOD	82	
3	230628AS08	1.9	45.1	89	34	1	1001	1649	201			253	595	54		GOOD	GOOD	79	
4	220406AS09	1.7	36	96.5	30	1	1008	1627	202			254	597	54		GOOD	GOOD	81	
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300			MIN 205	MIN 515	MIN 28					

Remarks * Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, NACE MR0103:2015
ISO 9001-2015/EN 10204-3.1. PED 2014/68/EU ANNEX I SECTION 4.3 INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD.
HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER. PICKLED AND PASSIVATED.
NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION
We certify that the above material has been inspected and tested and complies with the order/contract. This Material (BW Fittings, HS Code 730723), is produced by S.P. United Industry SDN. BHD.
Material here certified does not contain any steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No COUNCIL REGULATION (EU) 2023/1214 of 23 June 2023 and amending Regulation (EU) No 833/2014

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.
(上記の製品は、当該規格及び、で注文の要求事項に適合するてとを証明します.)

Head of QA/QC Dept.
質量/品質管理課長

raccortubi
Heat num. or Pcs. marking: M230941 - Qty:12,00
Customer:
Description: CURVE 90° LR 1-1/2" SCH.40/S SEAMLESS
ROSETTI MARINO S.p.A.
Order: 1724001267 - 24.06.24 - Item n.: 8 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002823
Protocol: CTCERC2024000006868 * CERTIFIED TRUE COPY
* Issued 26-07-2024
CTCERT2024000044434.1.0001

INSPECTION CERTIFICATE

EN 10204 : 3.1

Cert. to RACCORTUBI S.P.A

Order No. : 23TEC006
(注文番号) 00000323 S dtd 11-12-2023

S.P. UNITED INDUSTRY SDN. BHD.
(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Certification No. : MCP2404-00012-12

Invoice No : SP/FIT24-040

Date (日付) : 17/04/2024

LRQA CERTIFIED ISO 9001

Product	Specification	Specification for Pipe (Raw Material)
STAINLESS STEEL 90 DEG LONG RADIUS ELBOW (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 / ASME B16.9-2018 MSS SP-43-2019 / ASME BPVC II PART A-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*	Size	Dimension in mm		Lot No.	Quantity	Surface Inspection	Dimension Inspection	Manufacturing Method	Item Reference No.
		Outside Dia	Thickness						
1	1½" X 40S	48.26	3.68	M230941	500	PASSED	PASSED	COLD FORMED	N/A

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

Chemical Composition of Pipe (Raw Material) %

*	Heat No.	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100	
1	NY230828AW12	2.0	33.2	101	35	1	1002	1642	202	
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300	

Mechanical Properties of Pipe (Raw Material)

Type of Specimen	YS Mpa	TS Mpa	EL% (GL:50mm)		Flattening Test	HT Mpa		Hardness Test HRB
Longitudinal	259	599	55		PASSED	-		79
	MIN 205	MIN 515	MIN 28					

* Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, NACE MR0103:2015. ISO 9001-2015/EN 10204-3.1. PED 2014/68/EU ANNEX I SECTION 4.3 INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD. HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER. PICKLED AND PASSIVATED.
NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.
We certify that the above material has been inspected and tested and complies with the order/contract. This Material (BW Fittings, HS Code 730723), is produced by S.P. United Industry SDN. BHD.
Material here certified does not contain any steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No COUNCIL REGULATION (EU) 2023/1214 of 23 June 2023 and amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilizing the situation in Ukraine.

OTHERS:	DESCRIPTION :
N/A	N/A

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.

Head of QA/QC Dept.

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02	Nr A03 2024-C_MFF-01793	Data / Dated 17.07.2024 Z02

RACCORTUBI S.P.A. A06 Viale Lidice 38/40/42 10095 GRUGLIASCO TO IT	**Ordine / PO**	6097	A07
	Item	009	A07
	DDT / Delivery note	2024-3E301-0001635	A10
	Packing List	2024-3E401-0001641	A11
	Fattura / Invoice	2024-3E401-0001641	A12
	Ns. rif. / Our ref.	2024-3E201-0001062-0001	A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	23/70747	1,00	BLIND 150 RF 3" LF2CL1

Mat. in acc. a / Mat. in acc. to B02
ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03
FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED IN ACC. TO ASME V SEE REPORT No: 043/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,180	0,220	1,040	0,007	0,009	0,100	0,090	0,020	0,019	0,180	0,002	0,001	0,009
PRODUCT ANALYSIS	0,189	0,232	1,020	0,003	0,012	0,131	0,065	0,011	0,016	0,192	0,002	0,001	0,009
	Al								CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,026								0,396	0,353	0,392	0,120	--
PRODUCT ANALYSIS	0,027								0,405	0,359	0,401	0,142	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta / Test specimen C10		Forma / Shape C10	°C C03	Snervamento>0,2% / Yield Strength>0,2% C11	Snervamento>1,0% / Yield Strength>1,0% C11	Rottura / Tensile C12	Allungamento / Elongation C13	Contrazione / Reduction of area C14
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
29,50	25,00	1	20	371,0	--	548,0	33,9	74,6

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST					
HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
159,0 ; 160,0 ; 158,0	KV	10x10x55 mm	-46	102	104	103	103,0

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. / Marking in acc. to B06	ANSI/MSS SP-25-2018	Vis. & Dim. D01	SATISFACTORY	Origine / Origin of Steel B16	ITALY EUROPEAN UNION

Note / Notes Z01-B03
MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION
Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D. Gaffuri		MFF

MIM30800 del 29/08/2023

Customer: ROSETTI MARINO S.p.A. Order: 1724001267 - 24.06.24 - Item n.: 9 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 3"

raccortubi Heat num. or Pcs. marking: 23/70747 - Qty:1,00 Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY * Issued 26-07-2024

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	043/2024	Date	02/07/2024	Customer	RACCORTUBI S.P.A.	Order no.	6097
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Gaffuri Dario	Note	

Procedure / Standard	ASME V	Acceptance	ASME VIII DIV. 1 APPENDIX 6

Temperature	20°C

Yoke Type				Type and Trade Equipment						Magnetic Particles Type	
C.C.		C.A.	X	Silver Yoke NDT Italiana Serial no. 1822		Y-2 Yoke Magnaflux Serial no. E3313	X	Y-8 Yoke Magnaflux Serial no. 2440		Wet Fluorescent Magnetic Particles	Illumination Type
										NDT Italiana Elite FW1	Led UV Lamp Magnaflux Serial no. E3512
Note											

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined 100%	Results		Note
							C[1]	NC[1]	
	009	BL 150 RF 3"	23/70747	1	WHOLE ACCESSIBLE SURFACE	1	X		No indications detected
	010	WN 150 RF 3" STD	23/70167	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	014	WN 150 RF 3" STD	23/70167	1	WHOLE ACCESSIBLE SURFACE	1	X		No indications detected

Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfaritaly.com	Customer Inspector	

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 9 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 3"

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — **Nr** A03 2024-C_MFF-01793 — **Data / Dated** 17.07.2024 Z02

RACCORTUBI S.P.A. A06		**Ordine / PO**	6097 A07
Viale Lidice 38/40/42		**Item**	010 A07
10095 GRUGLIASCO TO IT		**DDT / Delivery note**	2024-3E301-0001635 A10
		Packing List	2024-3E401-0001641 A11
		Fattura / Invoice	2024-3E401-0001641 A12
		Ns. rif. / Our ref.	2024-3E201-0001062-0002 A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	23/70167	4,00	W/N 150 RF 3" STD LF2CL1

Mat. in acc. a / Mat. in acc. to B02
ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03
FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED IN ACC. TO ASME V SEE REPORT No: 043/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,180	0,250	1,030	0,008	0,011	0,090	0,110	0,020	0,018	0,190	0,002	0,001	0,010
PRODUCT ANALYSIS	0,190	0,197	1,010	0,009	0,011	0,130	0,071	0,011	0,020	0,200	0,002	0,001	0,010
	Al								CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,027								0,394	0,352	0,412	0,110	--
PRODUCT ANALYSIS	0,026								0,405	0,358	0,414	0,141	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta / Test specimen C10		Forma / Shape C10	°C C03	Snervamento>0,2% / Yield Strength>0,2% C11	Snervamento>1,0% / Yield Strength>1,0% C11	Rottura / Tensile C12	Allungamento / Elongation C13	Contrazione / Reduction of area C14
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
29,98	25,00	1	20	337,0	--	521,0	29,8	69,6

DUREZZA / HARDNESS C30 — **RESILIENZA / IMPACT TEST**

HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
154,0 ; 158,0	KV	10x10x55 mm	-46	58	53	49	53,3

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2020 ; ASME/ANSI B36.10M -2022		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH		

Marcatura in acc. / Marking in acc. to B06	ANSI/MSS SP-25-2018	Vis. & Dim. D01	SATISFACTORY	Origine / Origin of Steel B16	ITALY EUROPEAN UNION

Note / Notes Z01-B03
MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D. Gaffuri		MFF

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	043/2024	Date	02/07/2024	Customer	RACCORTUBI S.P.A.	Order no.	6097
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Gaffuri Dario	Note	

Procedure / Standard	ASME V	Acceptance	ASME VIII DIV. 1 APPENDIX 6	Temperature	20°C

Yoke Type				Type and Trade Equipment						Magnetic Particles Type	
C.C.		C.A.	X	Silver Yoke NDT Italiana Serial no. 1822		Y-2 Yoke Magnaflux Serial no. E3313	X	Y-8 Yoke Magnaflux Serial no. 2440		Wet Fluorescent Magnetic Particles	Illumination Type
										NDT Italiana Elite FW1	Led UV Lamp Magnaflux Serial no. E3512
Note											

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined 100%	Results		Note
							C[1]	NC[1]	
	009	BL 150 RF 3"	23/70747	1	WHOLE ACCESSIBLE SURFACE	1	X		No indications detected
	010	WN 150 RF 3" STD	23/70167	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	014	WN 150 RF 3" STD	23/70167	1	WHOLE ACCESSIBLE SURFACE	1	X		No indications detected

Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfaritaly.com	Customer Inspector	

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 10 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: Flange WN ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 3" thk 5,49

raccortubi Heat num. or Pcs. marking: 23/70167 - Qty:4,00

Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY
* Issued 26-07-2024

MAASS GLOBAL GROUP
WILHELM MAASS GMBH

Zeche Ernestine 12-18
45141 Essen
Tel.: +49 (0) 201 – 29 49 30
Fax.: +49 (0) 201 – 29 18 75
E-Mail: info@wmaass.de
Internet: www.wmaass.de

Inspection Certificate EN 10204 3.1
Abnahmeprüfzeugnis EN 10204 3.1

Certificate No - Zeugnisnummer
MTC-2080036-0603
Page 1 of 2 // Seite 1 von 2
24 May 2024
Revision.00

Maass Special Alloys Nederland B.V.
Wattbaan 51-6
Nieuwegein, 3439 ML
Netherlands

Customer´s Reference - Kundennummer
MSA24-50050
Manufacturer´s Works Order No - Hersteller Auftragsnummer
2080036

Material: Werkstoff	F316 / F316L
Requirements: Anforderungen	A182/A182M:2024 // SA182/SA182M:2023 // NACE MR0175:2021 // NACE MR 0103:2015 // ISO 15156:2020 // ASME Code Sect. II Part A:2023 // ASME B16.5:2020
Heat treatment: Wärmebehandlung	Solution annealed at 1050°C, rapid cooling by quenching in cold water

Item Characteristics – Artikelmerkmale

Line Item No Position	Quantity Menge	Material Description Material Bezeichnung	Heat No Schmelz Nr	Sample No Probe	
11	50	Flange NPS 2" Class 150 BL RF (ASME B16.5)	A-506/23	C1898	
14	100	Flange NPS 4" Class 150 SO RF (ASME B16.5)	A-7978	C1897	
15	21	Flange NPS 6" Class 150 SO RF (ASME B16.5)	A-7978	C1897	
15	54	Flange NPS 6" Class 150 SO RF (ASME B16.5)	A-7976	C1892	
26	100	Flange NPS 2" Class 150 WN S10S RF (ASME B16.5)	A-506/23	C1898	
27	30	Flange NPS 2" Class 300 WN S80S RF (ASME B16.5)	A-506/23	C1898	
28	25	Flange NPS 3" Class 600 WN S40S RF (ASME B16.5)	A-7978	C1897	
29	20	Flange NPS 6" Class 150 WN S40S RF (ASME B16.5)	A-7978	C1897	
30	10	Flange NPS 6" Class 150 WN S80S RF (ASME B16.5)	A-7978	C1897	

Chemical analysis - Chemische Analyse

Heat No. Schmelz Nr.	Req.	C%	Si%	Mn%	P%	S%	Mo%	Cr%	Ni%	Al%	Cu%	Ti%	Co%	N%
	min	**0**	**0**	**0**	**0**	**0**	**2,00**	**16,00**	**10,00**	**0**	**0**	**0**	**0**	**0**
	max	**0,030**	**1,00**	**2,00**	**0,045**	**0,030**	**3,00**	**18,00**	**15,00**					**0,100**
A-7978	**HA**	0,021	0,38	1,48	0,041	0,010	2,00	16,79	10,05					0,083
A-506/23	**HA**	0,016	0,32	1,50	0,041	0,014	2,02	16,65	10,05					0,065
A-7976	**HA**	0,022	0,39	1,44	0,042	0,006	2,01	16,59	10,02					0,076

Mechanical properties - Mechanische Eigenschaften

Heat No Schmelz Nr.	Sample No Probe	Temp. [°C]	Yield Strength Dehngrenze [N/mm²]		Tensile Strength Zugfestigkeit [N/mm²]	Elongation Bruchdehnung [%]	Reduction of Area Brucheinschnürung [%]	Location Lage	Dimension Abmessung [Ø]
			R_p 0,2	R_p 1,0	R_m	A_4	Z		
			>205		**>515**	**>30**	**>50**		
A-7978	C1897	+20	264	305	571	67	70	transversal	12,50
A-506/23	C1898	+20	297	315	565	59	72	transversal	12,50
A-7976	C1892	+20	256	298	583	58	75	transversal	12,50

Impact Strength - Kerbschlagzähigkeit

Heat No Schmelz Nr	Sample No Probe	Temp. [°C]	Impact energy Schlagarbeit [J]				Laterale expansion Laterale Breitung [mm]			Location Lage	Type Art	Dimension Abmessung
			1	2	3	Avg.						

Surface and dimensional check according to ASME B16.5
100% PMI with X-Ray Fluorescene (XRF) Spectro xSORT & found satisfactory
Mechanical tests according to ASTM A370
Steel made by electric furnace // Melting process = EAF/AOD
Flange facing finish according to ASME B16.5 - 2020 Cl.6.4.5
DIN ISO 9001 - 2015 - Certificate No. 01 100 2209906
This is to certify that the product described here has been manufactured, sampled, tested and inspected in accordance with purchaser order requirements.
This certificate is not a declaration of origin nor may it be used as a declaration of origin
Free from mercury and radioactive contamination
HA = Ladle Analysis // PA = Product Analysis // Req. = Requirements // Avg = Average

Trade Mark Handelszeichen	Customer Third Party Kundendritter	WMAASS Quality Department Signature WMAASS Qualitätswesen Unterschrift	
		Head of Quality Department Murat Cengiz	Work Inspector Patrick Oberhauser

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 11 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: W.N. 2" S.150 RF SCH.10/S

raccortubi Heat num. or Pcs. marking: A506/23 - Qty:2,00

Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY
* Issued 26-07-2024

MAASS GLOBAL GROUP
WILHELM MAASS GMBH

Zeche Ernestine 12-18
45141 Essen
Tel.: +49 (0) 201 – 29 49 30
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Inspection Certificate EN 10204 3.1
Abnahmeprüfzeugnis EN 10204 3.1

Hardness - Härte

Sample No Probe	Hardness measurement Härtemessung	1	2	3	4	5	Avg.	Req
C1897	HBW	158	161				159,5	
C1898	HBW	160	161				160,5	
C1892	HBW	158	161				159,5	

Additional tests - Zusätzliche Prüfungen

IGC resistant acc. ASTM A262 Pr.E: satisfactory

Company Wilhelm Maass GmbH is a AD2000 W0 and PED 2014/68/EU ANNEX I, Section 4.3 approved manufacturer

Surface and dimensional check according to ASME B16.5
100% PMI with X-Ray Fluorescene (XRF) Spectro xSORT & found satisfactory
Mechanical tests according to ASTM A370
Steel made by electric furnace // Melting process = EAF/AOD
Flange facing finish according to ASME B16.5 - 2020 Cl.6.4.5
DIN ISO 9001 - 2015 - Certificate No. 01 100 2209906
This is to certify that the product described here has been manufactured, sampled, tested and inspected in accordance with purchaser order requirements.
This certificate is not a declaration of origin nor may it be used as a declaration of origin
Free from mercury and radioactive contamination
HA = Ladle Analysis // PA = Product Analysis // Req. = Requirements // Avg = Average

Trade Mark Handelszeichen	Customer Third Party Kundendritter	WMAASS Quality Department Signature WMAASS Qualitätswesen Unterschrift	
		Head of Quality Department Murat Cengiz	Work Inspector Patrick Oberhauser

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 11 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: W.N. 2" S.150 RF SCH.10/S

raccortubi Heat num. or Pcs. marking: A506/23 - Qty:2,00

Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY
* Issued 26-07-2024

VIRAJ PROFILES PRIVATE LIMITED (fonnerly, Viraj Profiles Limited)(Forgings Div)
Survey No-140/1 & G-75 MIDC, Tarapur Ind.Area, Boisar, Dist Palghar,Maharashtra-401506,INDIA
Email-vflqc@viraj.com,web www.viraj.com(A01)

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

(A06)CUSTOMER : M/S. RACCORTUBI SPA VIALE DE GASPERI 194 I-20010 MARCALLO CON CASONE MI Italy.	Manufacturer's Symbol (A04)	(A03)MTR NO	100028548 / 53 REV.1
		INVOICE NUMBER	
		(Z02) DATE	23.12.2023
		MATERIAL SPEC	ASTM A182/A182M- 23 / ASME SA182/SA182M-23
		(B02) GRADE	F316/316L
		DIMENSIONAL SPEC	ASME B16.5-2020

(B01) STAINLESS STEEL FORGED FLANGES | (B04) DELIVERY CONDITION : HOT FORGED & FULLY MACHINED

ISO 9001:2015-TUV NORD REG No-04100031210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE(PED) 2014/68/EU,CERTIFING BODY-TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION No. 0045)

(A07)ORDER NO. 245	(A08) Sales Order No. 100028548 / 520	(A09)Article No: 52

(B09-B11)ITEM DESCRIPTION	(B08)QUANTITY(PCS)	(B07)HEAT NUMBER
2" WNRF S10S 300#	150	DL010

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%N									
MIN						16.00	10.00	2.00										
MAX	0.030	2.00	1.00	0.030	0.045	18.00	14.00	3.00	0.1000									
HEAT	0.026	1.51	0.35	0.021	0.038	16.76	10.07	2.01	0.0790									
PROD	0.023	1.51	0.34	0.017	0.039	16.76	10.05	2.01	0.0770									

MECHANICAL PROPERTIES

Test Specification ASTM - A370

(C01) Sample location : Mid thickness-forging	(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Specimen Shape - Round		ASTM E10	

Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13) Elongation%	Reduction of Area	(C32) Hardness			(C40) Charpy V-Notch 10x10x55mm (Values in Joules)			
		Rp=0.2%	Rp = 1%						(C42) Single values			(C43)
	N/mm2	N/mm2	N/mm2	Lo=4D	%	BHN-1	BHN-2	AVG	1	2	3	AVG
Req	515 MIN	205 MIN		30 MIN	50 MIN							
T	571.20	268.79	310.69	58.40	68.13	155	153	154	194	178	192	188

Other applicable Specifications :: NACE MR 0175 / ISO 15156-2015 & NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10

Melting Process : Induction furnace/Aragon Oxygen Decarburisation (AOD-IRS), Concast

Heat Treatment	Solution Annealed at 1080°C and water Quenched
Dimension	Conform with the specification (100% inspected)
Surface quality	Satisfactory Roughness Value - RA 3.2 TO 6.3 µm / 125 TO 250 AARH
PMI Test	No objection (100% tested with mobile spectro)
Inter Grunular Corrosion Test	Passed IGC test in accordance with ASTM A262 practice E
Radioactitivity Test	All the above material is tested for Radioactivity and found with in the limit of background radiation.
Liquid penetrant test	No objection(test method-ASTM E 165 & accepted as per ASME Sec.VIII division 1-appendix 8)

HS Code: 73072100 The material is manufactured /melted in Viraj Profiles Private Limited Steel Mill and is of Indian Origin. Material does not contain steel products originating in Russia mentioned The Russia (Sanctions (EU Exit) (Amendment) Regulations 2023 Regulation 46IA and 46IB and Annex XVII to the (EU) Regulation No 833/ 2014 and further amendment.

VIRAJ PROFILES PVT. LTD. VIRAJ QUALITY ASSURANCE

VIJAY KUMAR PILLAI (PRESIDENT)

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001:2015 CERTIFICATE No. 04 100 011032

ADM. OFFICE: 504, SUKH SAGAR, N. S. PATKAR MARG,
MUMBAI 400 007, INDIA
Tel.: 91-22- 66190600. Fax.: 91-22-66190633/34
Website : www.chandansteel.net
Email : csl@chandansteel.net

WORKS: Plot No. 35, Survery No.102/2 & 3 G. I. D. C.,
Village : Deheri, Tal- Umbergaon.
Dist Valsad, Gujarat - 396 171. INDIA.
Tel.: 91-260-256 2066 / 4367 / 1166. Fax.: 91-260-256 2287
E-mail : exports@chandansteel.net

L/c. No. :
L/c. Date:

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA
VIALE DE GASPERI, 194
20010 MARCALLO CON CASONE
(MILANO) - ITALIA

Test Certificate No. : 1673F/23-24- 21
Date of Issue :
P. O. No. : 00000058 Dt. 06.04.2023
Invoice No. & Date : 1673F/23-24

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES

Po Sr No.	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
21	CH-18895	164	8	519.388	ASTM/ASME A/SA182 F316/316L	1-1/2" WNRF 300 LBS 40S	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
21	0.022	0.43	1.66	0.036	0.028	16.82	2.01	10.08	-	-	0.072	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm2 (Rp0.2)	Tensile Strength N/mm² (R_m)	Elongation %	Reduction of Area %	Hardness (H. B. W.)
21	268	563	58	72	162-166
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Remarks:

1.The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions inspection OK.
3. PMI Test 100%:- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Inter-Granular Corrosion Test (ASTM A262 - 17 (Pr.E)):- Satisfactory.
7. The material conforms to ASTM A 182 - 22, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification.
8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
9. Surface roughness quality checked by comparator & found 125 - 250 AARH
10. Visual , Dimension and PMI performed by CSL.
11. Mechanical Testing perfomed by CSL.

Q.A.

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.

V.Y.NARAYANAN
WORKS INSPECTOR

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 13 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: W.N. 1.1/2" S.300 RF SCH.40/S

raccortubi Heat num. or Pcs. marking: CH-18895 - Qty:8,00

Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY
* Issued 26-07-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — **Nr** A03 2024-C_MFF-01793 — **Data / Dated** 17.07.2024 Z02

RACCORTUBI S.P.A. A06
Viale Lidice 38/40/42
10095 GRUGLIASCO TO IT

Ordine / PO	6097	A07
Item	014	A07
DDT / Delivery note	2024-3E301-0001635	A10
Packing List	2024-3E401-0001641	A11
Fattura / Invoice	2024-3E401-0001641	A12
Ns. rif. / Our ref.	2024-3E201-0001062-0003	A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	23/70167	1,00	W/N 150 RF 3" STD LF2CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -23 ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED IN ACC. TO ASME V SEE REPORT No: 043/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,180	0,250	1,030	0,008	0,011	0,090	0,110	0,020	0,018	0,190	0,002	0,001	0,010
PRODUCT ANALYSIS	0,190	0,197	1,010	0,009	0,011	0,130	0,071	0,011	0,020	0,200	0,002	0,001	0,010

	Al	CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,027	0,394	0,352	0,412	0,110	--
PRODUCT ANALYSIS	0,026	0,405	0,358	0,414	0,141	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta / Test specimen C10		Forma / Shape C10	°C C03	Snervamento>0,2% / Yield Strength>0,2% C11	Snervamento>1,0% / Yield Strength>1,0% C11	Rottura / Tensile C12	Allungamento / Elongation C13	Contrazione / Reduction of area C14
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
29,98	25,00	1	20	337,0	--	521,0	29,8	69,6

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST						
HBW C31		Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
154,0 ; 158,0		KV	10x10x55 mm	-46	58	53	49	53,3

Tratt. Term. / Heat treatment	B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70 GAS FURNACE
Dim in acc. a / Dim. acc. to	B14	ASME/ANSI B16.5 -2020 ; ASME/ANSI B36.10M -2022	
Finitura / Roughness	B15	ASME/ANSI B46.1 -2019 ; RF FINISHING 125-250 µin AARH	

Marcatura in acc. / Marking in acc. to B06		Vis. & Dim. D01		Origine / Origin of Steel B16	
ANSI/MSS SP-25-2018		SATISFACTORY		ITALY EUROPEAN UNION	

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION
Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D. Gaffuri		MFF

MIM30800 del 29/08/2023

Customer: ROSETTI MARINO S.p.A. Order: 1724001267 - 24.06.24 - Item n.: 14 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: Flange WN For Jackscrews diam.3" Thk.5.49mm 150LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 23/70167 - Qty:1,00 Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY * Issued 26-07-2024

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	043/2024	Date	02/07/2024	Customer	RACCORTUBI S.P.A.	Order no.	6097
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Gaffuri Dario	Note	

Procedure / Standard	ASME V	Acceptance	ASME VIII DIV. 1 APPENDIX 6

Temperature	20°C

Yoke Type				Type and Trade Equipment						Magnetic Particles Type	
C.C.		C.A.	X	Silver Yoke NDT Italiana Serial no. 1822		Y-2 Yoke Magnaflux Serial no. E3313	X	Y-8 Yoke Magnaflux Serial no. 2440		Wet Fluorescent Magnetic Particles	Illumination Type
										NDT Italiana Elite FW1	Led UV Lamp Magnaflux Serial no. E3512
Note											

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined 100%	Results		Note
							C[1]	NC[1]	
	009	BL 150 RF 3"	23/70747	1	WHOLE ACCESSIBLE SURFACE	1	X		No indications detected
	010	WN 150 RF 3" STD	23/70167	4	WHOLE ACCESSIBLE SURFACE	4	X		No indications detected
	014	WN 150 RF 3" STD	23/70167	1	WHOLE ACCESSIBLE SURFACE	1	X		No indications detected

Operator Signature		Approved by	*Metalfar Prodotti Industriali S.p.A.* *Mr. Simone Frigerio* *Quality Control Manager* *NDE Level II ISO 9712* *e-mail: qcm@metalfarItaly.com*	Customer Inspector	

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 14 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: Flange WN For Jackscrews diam.3" Thk.5.49mm 150LB RF ASTM/ASME A/SA350 Gr.LF2

raccortubi Heat num. or Pcs. marking: 23/70167 - Qty:1,00

Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY
* Issued 26-07-2024

raccortubi Heat num. or Pcs. marking: MR230609 - Qty:10,00
Customer:
Description: RID. CONC. 1"x3/4" SCH 40/S SEAMLESS
ROSETTI MARINO S.p.A.
Order: 1724001267 - 24.06.24 - Item n.: 32 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002823
Protocol: CTCERC20240006868 * CERTIFIED TRUE COPY
* Issued 26-07-2024
CTCERT20240001912.1.0001

INSPECTION CERTIFICATE

EN 10204 : 3.1

Cert. to RACCORTUBI S.P.A

Order No. : 23TEC002
(注文番号) 00000126 S dtd 11-05-2023

S.P. UNITED INDUSTRY SDN. BHD.
(COMPANY NO. 368524 W)
P.T. 741/745, KAWASAN PERUSAHAAN NILAI,
71800 NILAI, NEGERI SEMBILAN DARUL KHUSUS, MALAYSIA.
TEL: 606-7993577, 7993676, 7993677 FAX: 606-7994366
E-mail: contactus@spunited.com.my

Certification No. : MCP2401-00015-16

Invoice No : SP/FIT24-002

Date (日付) : 04/01/2024

LRQA CERTIFIED ISO 9001

Product	Specification	Specification for Pipe (Raw Material)
STAINLESS STEEL CONCENTRIC REDUCER (SEAMLESS)	ASTM A403-2022 / ASME SA403-2019 / ASME B16.9-2018 / MSS SP-43-2019 / ASME BPVC II PART A-2019 WP-S 316/316L	ASTM A312 TP 316/316L

*	Size	Dimension in mm		Lot No.	Quantity	Surface Inspection	Dimension Inspection	Manufacturing Method	Item Reference No.
		Outside Dia	Thickness						
1	1" x ¾" X 40S	33.40 X 26.67	3.38 X 2.87	MR230609	25	PASSED	PASSED	COLD FORMED	N/A

YS=Yield Strength (0.2%), EL=Elongation, H=Hardness Test
TS= Tensile Strength, GL=Gauge Length, HT=Hydrostatic Test

	Chemical Composition of Pipe (Raw Material) %										Mechanical Properties of Pipe (Raw Material)								
*	Heat No.	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Ni x 100	Cr x 100	Mo x 100		Type of Specimen	YS Mpa	TS Mpa	EL% (GL:50mm)		Flattening Test	HT Mpa		Hardness Test HRB
1	230103AT04	1.2	38.4	89.1	35	1	1004	1630	204		Longitudinal	257	597	57		PASSED	-		81
Specification		MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	1000 1400	1600 1800	200 300			MIN 205	MIN 515	MIN 28					

* Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, NACE MR0103:2015. ISO 9001-2015/EN 10204-3.1. PED 2014/68/EU ANNEX I SECTION 4.3 INTERGRANULAR CORROSION TEST (ASTM A262/E) - OK. PMI CHECK GOOD. HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER. PICKLED AND PASSIVATED.
NO WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.

We certify that the above material has been inspected and tested and complies with the order/contract. This Material (BW Fittings, HS Code 730723), is produced by S.P. United Industry SDN. BHD.
Material here certified does not contain any steel products originating in Russia mentioned in Annex XVII to the (EU) Regulation No COUNCIL REGULATION (EU) 2023/1214 of 23 June 2023 and amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilizing the situation in Ukraine.

OTHERS:	DESCRIPTION :
N/A	N/A

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.

Head of QA/QC Dept.

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

PTD 204334,JALAN PLATINUM UTAMA,

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Certified to NSF/ANSI 61

LRQA CERTIFIED ISO 9001 Approval No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO. : 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Raccortubi S.p.A

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-47131

Date : 2 Oct 2023

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
00000128 S	E000005893	ASTM A403/A403M - 22 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 23 / ASME SA 960/SA960M - 21 / ASME SECTION II PART A-2021	Solution Treated, Pickled-Passivated

Heat No.	Product & Size			Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
JO030-1	3" X 2"	SCH 10s	CON-REDUCER	43	WP316/316L-S	PASSED	11Y467
FTA051-01-103CR	3" X 2"	SCH 10s	CON-REDUCER	12	WP316/316L-S	PASSED	D151001
HTA077-01-103CR	3" X 2"	SCH 10s	CON-REDUCER	3	WP316/316L-S	PASSED	D180405
ITA087-01-103CR	3" X 2"	SCH 10s	CON-REDUCER	7	WP316/316L-S	PASSED	D190210

Specification	Chemical Composition (%)										Tensile Test *1			Hardness	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS (KSI / MPa)	TS (KSI / MPa)	E (%)	(HRB)	
Max															
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-		-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
JO030-1	0.025	0.35	1.12	0.029	0.002	16.42	11.08	2.06	< 0.01		254	603	54	79	PASSED
FTA051-01-103CR	0.020	0.45	0.91	0.038	0.002	16.29	11.07	2.05	< 0.01		240	560	54	76	PASSED
HTA077-01-103CR	0.022	0.32	0.91	0.038	0.002	16.95	11.09	2.06	< 0.01		230	560	52	71	PASSED
ITA087-01-103CR	0.021	0.35	1.10	0.033	0.005	16.75	11.12	2.15	< 0.01		235	530	60	73	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER, AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-22 STANDARD, SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE. LONGITUDINAL DIRECTION, GAUGE LENGTH (2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-15 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

HEAT TREATMENT. SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS. TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT

Pantech Stainless & Alloy Industries Sdn. Bhd.
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QAQC MANAGER HASSANUDDIN

Head of Quality Assurance Department

Form :FQA-030b R.6; 04-03-2022

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 33 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: RID. CONC. 3"x2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: JO030-1 - Qty:8,00

Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY * Issued 26-07-2024

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

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http:// www.pantech-group.com

Certified to NSF/ANSI 61 | LRQA CERTIFIED ISO 9001 Approval No.: ISO9001-0017465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO. : 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Raccortubi S.p.A

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-49115

Date : 1 Apr 2024

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
00000052 S	E000006270	ASTM A403/A403M - 22 / ASME SA 403/SA403M - 23	ASME B16.9 - 18 / ASTM A960/A960M - 23 / ASME SA 960/SA960M - 23 / ASME SECTION II PART A-2023	Solution Treated, Pickled-Passivated

Heat No.	Product & Size	Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
INA002-01-103CR	2" X 1 1/2" SCH 40s CON-REDUCER	3	WP316/316L-S	PASSED	11W561
JO030-1	2" X 1 1/2" SCH 40s CON-REDUCER	17	WP316/316L-S	PASSED	11Y467
LN007-1	2" X 1 1/2" SCH 40s CON-REDUCER	80	WP316/316L-S	PASSED	NY220905AS01

Specification / Heat No.	Chemical Composition (%) C	Si	Mn	P	S	Cr	Ni	Mo	Pb	Tensile Test *1 YS (KSI / MPa)	TS	E (%)	Hardness (HRB)	Inter-granular corrosion test
Max														
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-	-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-	205	515	28	-	
INA002-01-103CR	0.017	0.36	1.19	0.034	0.002	16.44	11.14	2.14	< 0.01	245	545	52	71	PASSED
JO030-1	0.025	0.35	1.12	0.029	0.002	16.42	11.08	2.06	< 0.01	254	607	59	79	PASSED
LN007-1	0.015	0.39	0.91	0.037	0.001	16.35	10.16	2.09	< 0.01	262	565	67	70	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER; AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-22 STANDARD. SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE. LONGITUDINAL DIRECTION. GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-15 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT

GENERAL MARKING FORMAT : NSF8-61 PANTECH S.A. [PRODUCT TYPE FOR LR/SR ONLY] [SIZE]" [THICKNESS] A/SA403 [GRADE] HEAT NO. [HEAT NO] MALAYSIA

Pantech Stainless & Alloy Industries Sdn. Bhd.
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Tel: +607-251 8888 Fax: +607-251 9999

QAQC MANAGER HASSANUDDIN

Head of Quality Assurance Department

Form :FQA-030b R.7; 30-01-2024

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 34 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: RID. CONC. 2"x1.1/2" SCH.10S/40S SEAMLESS

raccortubi Heat num. or Pcs. marking: LN007-1 - Qty:4,00

Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY * Issued 26-07-2024

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

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NSF Certified to NSF/ANSI 61

LRQA CERTIFIED ISO 9001 Approval No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO. : 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Raccortubi S.p.A

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-38860

Date : 26 May 2022

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
00000103 S	E000004754	ASTM A403/A403M - 20 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 20 / ASME SA 960/SA960M - 21 / ASME SECTION II PART A-2021	Solution Treated, Pickled-Passivated

Heat No.	Product & Size	Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
JO043-1	4" X 2" SCH 10s CON-REDUCER	100	WP316/316L-S	PASSED	19AL138

Specification	Chemical Composition (%)										Tensile Test *1			Hardness	
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS (KSI / MPa)	TS (KSI / MPa)	E (%)	(HRB)	Inter-granular corrosion test
Max															
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-		-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
JO043-1	0.027	0.36	1.09	0.028	0.002	16.35	11.05	2.04	< 0.01		256	605	58	80	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER;

AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-12a STANDARD, SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE. LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-10 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

Pantech Stainless & Alloy Industries Sdn. Bhd.
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QACC MANAGER HASSANUDDIN

Head of Quality Assurance Department

Form :FQA-030b R.6; 04-03-2022

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 35 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: RID. CONC. 4"x2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: J0043-1 - Qty:1,00

Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY * Issued 26-07-2024

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

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http:// www.pantech-group.com

Certified to NSF/ANSI 61

LRQA CERTIFIED ISO 9001 Approval No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX I, PARA 4.3. PED CERTIFICATE NO. : 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Raccortubi S.p.A

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-49124

Date : 1 Apr 2024

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
00000052 S	E000006270	ASTM A403/A403M - 22 / ASME SA 403/SA403M - 23	ASME B16.9 - 18 / ASTM A960/A960M - 23 / ASME SA 960/SA960M - 23 / ASME SECTION II PART A-2023	Solution Treated, Pickled-Passivated

Heat No.	Product & Size	Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
LN007-1	2" X 1 1/2" SCH 40s ECC-REDUCER	18	WP316/316L-S	PASSED	NY220905AS01
MN086-1	2" X 1 1/2" SCH 40s ECC-REDUCER	7	WP316/316L-S	PASSED	NY230413AS07

Specification	Chemical Composition (%)										Tensile Test *1			Hardness	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS (KSI / MPa)	TS (KSI / MPa)	E (%)	(HRB)	
Max															
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-		-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
LN007-1	0.015	0.39	0.91	0.037	0.001	16.35	10.16	2.09	< 0.01		262	565	67	70	PASSED
MN086-1	0.021	0.40	0.88	0.030	0.001	16.20	10.01	2.07	< 0.01		323	638	62	76	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER; AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-22 STANDARD. SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE. LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-15 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

*1: YS; YIELD STRENGTH TS; TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT

GENERAL MARKING FORMAT : NSF-61 PANTECH S.A. [PRODUCT TYPE FOR LR/SR ONLY] [SIZE]* [THICKNESS] A-SA 403 [GRADE] HEAT NO. [HEAT NO.] MALAYSIA

Pantech Stainless & Alloy Industries Sdn. Bhd.
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PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. DAQC MANAGER HASSANUDDIN

Head of Quality Assurance Department

Form :FQA-030b R.7; 30-01-2024

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 38 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: RID. ECC. 2"x1.1/2" SCH.10S/40S SEAMLESS

raccortubi Heat num. or Pcs. marking: MN086-1 - Qty:1,00

Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY * Issued 26-07-2024

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

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Certified to NSF/ANSI 61

LRQA CERTIFIED ISO 9001 Approval No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO.: 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Raccortubi S.p.A

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-48124

Date : 19 Feb 2024

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
00000329 S	E000006192	ASTM A403/A403M - 22 / ASME SA 403/SA403M - 23	ASME B16.9 - 18 / ASTM A960/A960M - 23 / ASME SA 960/SA960M - 23 / ASME SECTION II PART A-2023	Solution Treated, Pickled-Passivated

Heat No.	Product & Size			Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
MN094-1	4" X 2"	SCH 10s	REDUCING TEE	25	WP316/316L-S	PASSED	NY230412AT09
MN094-1	4" X 3"	SCH 10s	REDUCING TEE	20	WP316/316L-S	PASSED	NY230412AT09
LN011-1	4" X 3"	SCH 40s	REDUCING TEE	32	WP316/316L-S	PASSED	NY220903AV08
HTA080-01-103RT	4" X 3"	SCH 40s	REDUCING TEE	18	WP316/316L-S	PASSED	D180805
MN041-1	6" X 3"	SCH 10s	REDUCING TEE	25	WP316/316L-S	PASSED	NY230412AV04
MN077-1	2 1/2" X 2"	SCH 10s	CON-REDUCER	25	WP316/316L-S	PASSED	230308BE10-01
MN040-1	3" X 2 1/2"	SCH 40s	CON-REDUCER	30	WP316/316L-S	PASSED	NY230412AT09
LN011-1	5" X 4"	SCH 40s	CON-REDUCER	10	WP316/316L-S	PASSED	NY220903AV08
MN075-1	6" X 4"	SCH 10s	CON-REDUCER	50	WP316/316L-S	PASSED	221220AE10-01
MO070-1	6" X 4"	SCH 40s	CON-REDUCER	25	WP316/316L-S	PASSED	N230129AW16

Specification / Heat No.	Chemical Composition (%)										Tensile Test *1			Hardness	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS (KSI / MPa)	TS (KSI / MPa)	E (%)	(HRB)	
Max															
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-		-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
MN094-1	0.013	0.47	0.80	0.037	0.003	16.62	10.20	2.01	< 0.01		246	588	58	71	PASSED
MN094-1	0.013	0.47	0.80	0.037	0.003	16.62	10.20	2.01	< 0.01		246	588	58	71	PASSED
LN011-1	0.015	0.34	0.88	0.033	0.001	16.52	10.01	2.06	< 0.01		246	573	60	76	PASSED
HTA080-01-103RT	0.018	0.37	0.89	0.039	0.004	16.85	11.08	2.07	< 0.01		235	565	54	72	PASSED
MN041-1	0.021	0.37	0.88	0.033	0.001	16.26	10.20	2.02	< 0.01		299	609	51	68	PASSED
MN077-1	0.013	0.29	1.06	0.035	0.001	16.44	10.04	2.03	< 0.01		280	556	55	64	PASSED
MN040-1	0.018	0.47	0.83	0.034	0.001	16.39	10.15	2.04	< 0.01		270	578	56	74	PASSED
LN011-1	0.015	0.34	0.88	0.033	0.001	16.52	10.01	2.08	< 0.01		235	559	63	63	PASSED
MN075-1	0.014	0.24	0.96	0.034	0.001	16.41	10.10	2.04	< 0.01		254	587	56	68	PASSED
MO070-1	0.018	0.35	0.85	0.032	0.001	16.25	10.01	2.01	< 0.01		255	595	57	79	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER;

AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-22 STANDARD, SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE. LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-15 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT

GENERAL MARKING FORMAT : NSF#-61 PANTECH S.A. [PRODUCT TYPE FOR LR/SR ONLY] [SIZE]* [THICKNESS] A/SA403 [GRADE] HEAT NO. [HEAT NO.] MALAYSIA

Pantech Stainless & Alloy Industries Sdn. Bhd.
200601013677 (733428-W)
PTD 204334, Jalan Platinum Utama,
Kawasan Perindustrian Pasir Gudang, Zon 12B,
81700 Pasir Gudang, Johor.
Tel: +607-251 8888 Fax: +607-251 9999

QAQC MANAGER MASSAHUDDIN

Head of Quality Assurance Department

Form :FQA-030b R.7; 30-01-2024

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 40 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: TEE RID. 4"x2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: MN094-1 - Qty:6,00

Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY

* Issued 26-07-2024

MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

PTD 204334,JALAN PLATINUM UTAMA,

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZONE 12B, 81700 PASIR GUDANG

JOHOR DARUL TAKZIM, MALAYSIA

Tel: +607-2518888 Fax: +607-2519999 Website: www.pantechssalloy.com

http:// www.pantech-group.com

Certified to NSF/ANSI 61

LRQA CERTIFIED ISO 9001 Approval No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO. : 0343/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: .

Product: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-46697

Date : 30 Dec 2023

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition
806800 & 806740 & 806779 & 806820	E000006115	ASTM A403/A403M - 22 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 23 / ASME SA 960/SA960M - 21 / ASME SECTION II PART A-2021	Solution Treated, Pickled-Passivated

	Heat No.	Product & Size			Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
	MN048-1	4"	SCH 40s	TEE	30	WP316/316L-S	PASSED	221220BE15-02
	LN010-1	6"	SCH 10s	TEE	20	WP316/316L-S	PASSED	NY220903AS05
	MN078-1	10"	SCH 10s	TEE	30	WP316/316L-S	PASSED	221220BE13-01
	MN094-1	3" X 1 1/2"	SCH 10s	REDUCING TEE	20	WP316/316L-S	PASSED	NY230412AT09
	MN094-1	4" X 3"	SCH 10s	REDUCING TEE	30	WP316/316L-S	PASSED	NY230412AT09
X	MO070-1	6" X 3"	SCH 40s	REDUCING TEE	20	WP316/316L-S	PASSED	N230129AW16
	MN034-1	3" X 1"	SCH 10s	CON-REDUCER	10	WP316/316L-S	PASSED	NY220918AT17
	MN094-1	3" X 2"	SCH 10s	CON-REDUCER	100	WP316/316L-S	PASSED	NY230412AT09
	MN073-1	3" X 2"	SCH 40s	CON-REDUCER	50	WP316/316L-S	PASSED	221113AE04-02
	MN075-1	6" X 3"	SCH 10s	CON-REDUCER	30	WP316/316L-S	PASSED	221220AE10-01

Specification	Chemical Composition (%)										Tensile Test *1			Hardness	
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb		YS	TS	E		Inter-granular corrosion test
Max											(KSI / MPa)		(%)	(HRB)	
Min	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-		-	-	-	90	
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-		205	515	28	-	
MN048-1	0.015	0.27	0.94	0.039	0.001	16.31	10.16	2.03	< 0.01		310	591	59	77	PASSED
LN010-1	0.017	0.44	0.89	0.031	0.001	16.60	10.01	2.06	< 0.01		237	550	64	68	PASSED
MN078-1	0.011	0.24	0.96	0.036	0.001	16.50	10.04	2.00	< 0.01		220	535	56	76	PASSED
MN094-1	0.013	0.47	0.80	0.037	0.003	16.62	10.20	2.01	< 0.01		251	600	58	65	PASSED
MN094-1	0.013	0.47	0.80	0.037	0.003	16.62	10.20	2.01	< 0.01		246	588	58	71	PASSED
MO070-1	0.018	0.35	0.85	0.032	0.001	16.25	10.01	2.01	< 0.01		255	595	57	79	PASSED
MN034-1	0.013	0.43	0.98	0.032	0.001	16.46	10.01	2.07	< 0.01		262	590	59	65	PASSED
MN094-1	0.013	0.47	0.80	0.037	0.003	16.62	10.20	2.01	< 0.01		251	600	58	65	PASSED
MN073-1	0.012	0.28	0.99	0.036	0.001	16.18	10.03	2.01	< 0.01		228	560	60	67	PASSED
MN075-1	0.014	0.24	0.96	0.034	0.001	16.41	10.10	2.04	< 0.01		314	615	60	73	PASSED

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER;

AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-22 STANDARD. SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE. LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS : AOD / VOD

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-15 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

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MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

MATERIAL DOES NOT CONTAIN STEEL PRODUCTS ORIGINATING IN RUSSIA MENTIONED IN ANNEX XVII TO THE (EU) REGULATION NO 833/2014 AND FURTHER AMENDMENT

Pantech Stainless & Alloy Industries Sdn. Bhd.
200601013677 (733428-W)
PTD 204334, Jalan Platinum Utama,
Kawasan Perindustrian Pasir Gudang, Zon 12B,
81700 Pasir Gudang, Johor.
Tel: +607-251 8888 Fax: +607-251 9999

QA/QC MANAGER

Head of Quality Assurance Department

Form :FQA-030b R.6; 04-03-2022

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 42 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: TEE RID. 6"x3" SCH.40S/10S SEAMLESS

raccortubi Heat num. or Pcs. marking: M0070-1 - Qty:6,00

Protocol: CTCERC202400006868 * CERTIFIED TRUE COPY * Issued 26-07-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724001267	123A90A	Q012400918

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani 29.10.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 18/10/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00009591
Packing list	PLPLIS202400009531
Ns. Rif.	00002823
Vs. Rif.	1724001267 - 24.06.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00009591

18/10/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00002823

Ordine N. P.O. number: 1724001267 - 24.06.24

123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*	Immagine *Image*
27	1	NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 4"x1.1/2" thk 6,02mmX5,08mm	T24617	CTCERT202400006888_1.0001.TIF CTCERT202400006888_1.0002.TIF CTCERT202400006888_2.0001.TIF
28	1	NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM A182 Gr.F55 4"x1.1/2" thk 3,05mmX3,68mm	712578	CTCERT202400006889_1.0001.TIF CTCERT202400006889_1.0002.TIF CTCERT202400006889_2.0001.TIF CTCERT202400006889_2.0002.TIF CTCERT202400006889_3.0001.TIF CTCERT202400006889_4.0001.TIF CTCERT202400006889_4.0002.TIF CTCERT202400006889_4.0003.TIF

raccortubi

00009591

18/10/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
27		1 NR	NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 4''x1.1/2'' thk 6,02mmX5,08mm	T24617
28		1 NR	NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM A182 Gr.F55 4''x1.1/2'' thk 3,05mmX3,68mm	712578

raccortubi

00009591

18/10/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 18/10/2024
Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
27	NR	1	0.00	NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 4"x1.1/2" thk 6,02mmX5,08mm	T24617
28	NR	1	0.00	NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM A182 Gr.F55 4"x1.1/2" thk 3,05mmX3,68mm	712578

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD Industrie Service

ZERTIFIKAT

Die Notifizierte Stelle - Kennnummer 0036 -
der TÜV SÜD Industrie Service GmbH

bescheinigt, dass die Firma

FITTINOX S.r.l.
Via Copernico, 34/36
IT-29027 Podenzano (PC)

als Werkstoffhersteller für

Formstücke, Flansche und Schmiedestücke aus unlegierten, niedrig und hochlegierten Stählen

über ein zertifiziertes Qualitätsmanagementsystem entsprechend Anhang I, Absatz 4.3 der Druckgeräterichtlinie 2014/68/EU, AD 2000-Merkblatt W 0 sowie EN 764-5, Absatz 4.2

verfügt und dieses anwendet.

Der Geltungsbereich ist aus der Anlage ersichtlich.
Weitere Einzelheiten sind im Bericht Nr. C-722312218-23 genannt.

Das Unternehmen ist daher berechtigt, in Übereinstimmung mit der Druckgeräte-richtlinie 2014/68/EU Bescheinigungen über spezifische Prüfungen an den Werkstoffen im o.g. Geltungsbereich auszustellen. Eventuell weitergehende Anforderungen aus den angewandten technischen Spezifikationen zur Erfüllung des Anhanges I bleiben unberührt.

Das Zertifikat ist gültig bis 31.05.2026.

Zur Aufrechterhaltung der Gültigkeit ist ein jährliches Überwachungsaudit erforderlich.

Zertifikat-Nr.: DGR-0036-QS-W 960/2020/MUC-03
München, 15. August 2023

Notified Body, Nr. 0036

(M. Strobel)

TÜV SÜD Industrie Service GmbH 00 36 Notified Body

EQ3061038

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD
Industrie Service

CERTIFICATE

The Notified Body - 0036 -
of TÜV SÜD Industrie Service GmbH

certifies that

FITTINOX S.r.l.
Via Copernico, 34/36
IT-29027 Podenzano (PC)

has implemented, operates and maintains a

Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU, Annex I, Section 4.3, AD 2000-Merkblatt W 0 as well as EN 764-5, Para. 4.2

as a material manufacturer for the scope of

fittings, flanges and forgings in unalloyed, low and high alloyed steels.

The scope of the approval is described in the annex to this certificate.
Further details are mentioned in report no. C-722312218-23.

The manufacturer is therefore authorized to issue certificates of specific product control within the scope of the assessed quality system and in accordance with the Pressure Equipment Directive 2014/68/EU. Possible additional requirements - specific to applied technical specifications to meet PED Annex I - are not affected.

This certificate is valid through 31.05.2026.

In order to adhere the validity an annual surveillance audit is required.

Certificate No.: DGR-0036-QS-W 960/2020/MUC-03
Munich, August 15th, 2023

Notified Body, Nr. 0036

TÜV SÜD Industrie Service GmbH 00 36 Notified Body

(M. Strobel)

EQ3061038

Customer: ROSETTI MARINO S.p.A.

Description: NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 4"x1.1/2" thk 6,02mmX5,08mm

Order: 1724001267 - 24.06.24 - Item n.: 27 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000282

Heat num. or Pcs. marking: T24617 - Qty:1,00

Protocol: CTCERC20240000591 * CERTIFIED TRUE COPY * Issued 18-10-2024

CTCERT20240000688.1.0001

fittinox PIPE FITTINGS SOLUTIONS

VIA N. COPERNICO,34/36 (Z.I.)
29027 PODENZANO (PC) ITALY
TEL: +39 0523 524138-524208
FAX +39 0523 5241423

INSPECTION CERTIFICATE
according to ISO 10474 / EN 10204
MATERIAL TEST CERTIFICATE

N° 24C0357/01 Rev.0
type: 3.1
DATA 17/10/2024

FITTINOX JOB	CUSTOMER	CUSTOMER P.O.	PROJECT
24C0357	RACCORTUBI S.p.A.	00006099	N/A
MATERIAL SPECIFICATION & GRADE	ASME BPVC.II.A 2023 SA350/SA350M / ASTM A350/A350M:23 LF2 CL. 1	DIMENSIONS & TOLERANCES	ASME B16.5-2017

FITTINOX ITEM	CUSTOMER ITEM	Q. TY	ITEM DESCRIPTION	HEAT	LOT	CODE	TEST N.
0001	1	1	NIPOFLANGE REINFORCED D.4" x 1 1/2" THK 6.02mm / 5.08mm 150# RF ASTM/ASME A/SA350 LF2 CL.1 - ITEM 27	T24617			TS00414

BASE MATERIAL TRACEABILITY

HEAT NUMBER	MELTING PROCESS	MILL CERTIFICATE	STEEL MAKER
T24617	E.F. + V.D. + FULLY KILLED	2011/05/000293-KRY	SOCHOROVA VALCOVNA TZ a.s.

CHEMICAL ANALYSIS (%)

Min		0,60	0,15										
Max	0,300	1,35	0,30	0,035	0,040	0,30	0,40	0,12	0,080	0,40	0,020	1,000	
HEAT N°	C	Mn	Si	P	S	Cr	Ni	Mo	V	Cu	Nb	V+Ni+Cu+Mo+Cr	
T24617	0,200	1,07	0,21	0,014	0,004	0,06	0,02	0,01	0,003	0,05	0,002	0,141	

HEAT TREATMENT DETAILS

HEAT	LOT	TEST N.	TYPE HT	HEATING RATE °C/h	HOLDING TEMPERATURE °C	HOLDING TIME (hh:mm)	COOLING RATE °C/h	COOLING MEDIA
T24617		TS00414	NORMALIZING		900	02:00		STILL AIR

MECHANICAL PROPERTIES

		TENSILE TEST											HARDNESS		IMPACT TEST (KV)							
		LIMITS				≥ 250		485÷655	≥ 22		≥ 30		≤ 197	≤ 197			10 x 10	-46	≥ 16	≥ 20		
HEAT LOT	TEST N.	TEMP	DIR.	POS.	DIM.	YS 0.2%	YS (1%)	TS	A Elong.	L0	Z	YS/ TS	VALUES	AVG VALUE	DIR.	POS.	DIM.	TEMP	IMPACT TEST VALUES	IMPACT TEST AVG	SHEAR AREA VALUES	LATERAL EXP. VALUES
		(°C)			(mm)	(MPa)	(MPa)	(MPa)	(%)		(%)		(HBW)	(HBW)			(mm)	(°C)	(J)	(J)	%	mm.
T24617 -	TS00414	23	T	1/2	Ø 6.26	311		502	36,4	4d	65,2	0,62	146-151-154	150,33	T	1/2	10 x 10	-46	48-52-55	51,67		

TRADE MARK

DATE 17/10/2024

ISSUED BY A. ARCELLI

VERIFIED BY G. RAIMONDI

INSPECTOR

DATE

INSPECTOR

DATE

fittinox
PIPE FITTINGS SOLUTIONS

VIA N. COPERNICO,34/36 (Z.I.)
29027 PODENZANO (PC) ITALY
TEL: +39 0523 524138-524208
FAX +39 0523 5241423

INSPECTION CERTIFICATE
according to ISO 10474 / EN 10204
MATERIAL TEST CERTIFICATE

N° 24C0357/01 Rev.0
type: 3.1
DATA 17/10/2024

Customer: ROSETTI MARINO S.p.A.
Description: NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2 4"x1.1/2" thk 6,02mmX5,08mm
Order: 1724001267 - 24.06.24 - Item n.: 27 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002823

raccortubi
Heat num. or Pcs. marking: T24617 - Qty:1,00
Protocol: CTCERC20240000591 * CERTIFIED TRUE COPY
* Issued 18-10-2024

REMARKS AND SUPPLEMENTARY INFORMATION

-Mechanical properties on pieces in finished conditions.
-Starting Material: round forged bar
-Type of construction: seamless.
-Method of manufacture: Machined directly from round forged bar.
-100% Visual dimensional and marking check carried out on finished pieces with satisfactory results.
-100% Positive material identification (PMI) carried out on finished pieces with satisfactory results.
-Marking: MSS-SP25-08

WE CERTIFY THAT THE DELIVERED PRODUCTS COMPLY WITH THE ORDER

TRADE MARK	ISSUED BY A. ARCELLI	VERIFIED BY G. RAIMONDI	INSPECTOR	INSPECTOR
DATE 17/10/2024			DATE	DATE

EITI S.r.l. - Qualytube Division
Via Pietro Palmieri 29, 10138 Torino
Via Enrico Berlinguer 4, 20060 Pozzo d'Adda (MI)

qualytube

EITI - The Inspection Body.

MagneticTest Report

Test Report
Rapporto di Prova
Prüfbericht
Rapport d'essai

Report No. - Rapporto N°
Berichten Nr. - Rapport N° : MT24034

Date - Data - Vom - date : 17/10/2024

Customer - Cliente - Besteller - Acheteur 1)
RACCORTUBI

Customer - Cliente - Besteller - Acheteur 2)

Order No. - Ordine N° - Bestell-Nr. - Commande N°
No. 90

Performed Test
100% MAGNETIC TEST ON ACCESSIBLE SURFACE

Material Description- Descrizione del Materiale
Gegenstand - Dèsignation du Produit
see table below

Test	Electromagnetic joke	According to	EN 10246-12 ASTM E709 - ASME V Article 7
Particles type	fluorescent	According to	ASTM SA960 SUPPLEMENTARY S53
Joke	AC - Magnafulx	Particles Description	MG ICRI G182 batch. No. 2023 04 H2
Calibration block	ASME 4,5 Kg	Inspection conditions	BLACK UV LIGHT - 1000 µW/cm2 min.
		Pie gauge	ASME

Result - Esito
Ergebnis - Résultat
SATISFACTORY
NO REPORTABLE INDICATIONS HAVE BEEN FOUND

ITEM	DIAMETER (NPS) THICKNESS (mm)	STANDARD / GRADE	HEAT	No.		NOTE
24	3/4" x 3,91mm	ASTM/ASME A/SA 333 GR.6	24636	5		NIPPLE L=100mm
27	4"x1.1/2" 6,02mm/5,08mm	ASTM/ASME A/SA350 LF2	T24617	1		NIPOFLANGE REINFORCED

issued by
Qualytube
Nicolò Tuccini - NDT Specialist
ISO 9712 CICPND 28046/PND/C Level 2 UT
ISO 9712 CICPND 27050/PND/C Level 2 PT
ISO 9712 CICPND 28229/PND/C Level 2 MT

Verified by
EITI - European Institute of Technical Inspections
Dario Pasqualini
Technical Director
ISO 9712 Level 3 - MT/PT/VT/RT

Customer

644/996

CTCERT20240000006889.1.0001

fittinox
PIPE FITTINGS SOLUTIONS

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29027 PODENZANO (PC) ITALY
TEL: +39 0523 524138-524208
FAX +39 0523 5241423

INSPECTION CERTIFICATE
according to ISO 10474 / EN 10204
MATERIAL TEST CERTIFICATE

N° 24C0357/02 Rev.0
type: 3.1
DATA 17/10/2024

Customer: ROSETTI MARINO S.p.A.
Description: NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM A182 Gr.F55 4"x1.1/2" thk 3,05mmX3,68mm
Order: 1724001267 - 24.06.24 - Item n.: 28 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000282
Heat num. or Pcs. marking: 712578 - Qty:1,00
Protocol: CTCERC20240000591

FITTINOX JOB	CUSTOMER	CUSTOMER P.O.	PROJECT
24C0357	RACCORTUBI S.p.A.	00006099	N/A
MATERIAL SPECIFICATION & GRADE	ASTM A182/A182M-23 F55 / MDS D54 / ISO 17781	DIMENSIONS & TOLERANCES	ASME B16.9-2018 - ASME B16.25-2017

FITTINOX ITEM	CUSTOMER ITEM	Q. TY	ITEM DESCRIPTION	HEAT	LOT	CODE	TEST N.
0002	2	1	NIPOFLANGE REINFORCED D.4" x 1 1/2" THK 3.05mm / 3.68mm 150# RF ASTM A182 F55 - ITEM 28	712578			TN01211
0003	3	1	FLANGIA GREZZA D.1 1/2" 150# RF ASTM A182 F55 PER PROVE POS.2	712578			TN01211

BASE MATERIAL TRACEABILITY

HEAT NUMBER	MELTING PROCESS	MILL CERTIFICATE	STEEL MAKER
712578	E.F. + A.O.D.	305370	BGH Edelstahl Freital GmbH

CHEMICAL ANALYSIS (%)

Min						24,00	6,00	3,00	0,50	0,2000	0,50	
Max	0,030	1,00	1,00	0,030	0,010	26,00	8,00	4,00	1,00	0,3000	1,00	
HEAT N°	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	N	W	Pren
712578	0,029	0,64	0,27	0,024	0,001	25,57	7,74	3,56	0,63	0,2575	0,80	41.44

HEAT TREATMENT DETAILS

HEAT	LOT	TEST N.	TYPE HT	HEATING RATE °C/h	HOLDING TEMPERATURE °C	HOLDING TIME (hh:mm)	COOLING RATE °C/h	COOLING MEDIA
712578		TN01211	SOLUTION ANNEALING	50	1100	03:00		WATER

MECHANICAL PROPERTIES

		TENSILE TEST										HARDNESS		IMPACT TEST (KV)							
		LIMITS				≥ 550		≥ 800	≥ 25		≥ 45	≤ 32	≤ 32			10 x 10	-46	≥ 35	≥ 45		
HEAT LOT	TEST N.	TEMP	DIR.	POS.	DIM.	YS 0.2%	YS (1%)	TS	A Elong.	L0	Z	YS/ TS	VALUES	AVG VALUE	DIR.	POS.	DIM.	TEMP	IMPACT TEST VALUES	IMPACT TEST AVG	SHEAR AREA VALUES	LATERAL EXP. VALUES
		(°C)			(mm)	(MPa)	(MPa)	(MPa)	(%)		(%)		(HRC)	(HRC)			(mm)	(°C)	(J)	(J)	%	mm.
712578 -	TN01211	23	L	1/2	Ø 12.49	607		816	42,3	4d	68	0,74	20,8-19,9-20,6	20,43	T	1/2	10 x 10	-46	306,2-298,4-285,6	296,73	100-100-100	2.65-2.58-2.44

TRADE MARK

DATE 17/10/2024

ISSUED BY A. ARCELLI

VERIFIED BY G. RAIMONDI

INSPECTOR

DATE

INSPECTOR

DATE

* CERTIFIED TRUE COPY
* Issued 18-10-2024

fittinox
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FAX +39 0523 5241423

INSPECTION CERTIFICATE
according to ISO 10474 / EN 10204
MATERIAL TEST CERTIFICATE

N° 24C0357/02 Rev.0
type: 3.1
DATA 17/10/2024

Customer: ROSETTI MARINO S.p.A.

Description: NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM A182 Gr.F55 4"x1.1/2" thk 3,05mmX3,68mm

Order: 1724001267 - 24.06.24 - Item n.: 28 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000028823

raccortubi Heat num. or Pcs. marking: 712578 - Qty:1,00

REMARKS AND SUPPLEMENTARY INFORMATION

-Mechanical properties on pieces in finished conditions.
-Starting material: Round forged bar
-Type of construction: Seamless.
-Method of manufacture: Machined directly from round bar.
-100% Positive material identification (PMI) carried out on finished pieces with satisfactory results.
-For G48 meth.A corrosion test see Sider Test report no. G48ACE 25211/24
-For ferrite check see Sider Test report no. E562 13139/19
-For microstructural analysis see Sider Test report no. MIC 13139/19
-100% Dye penetrant test carried out acc. to ASTM E165 on finished pieces with satisfactory results. See attached report no. 24C0357/02-PTR
-100% Visual-Dimensional and marking check carried out on finished pieces with satisfactory results. See report 24C0357/02-VDM
-Marking: MSS SP25-08.
-Surface Protection: Passivation
-Material acc. to NACE MR0175/ISO 15156-3:2015-NACE MR0103/ISO 17945:2016 Hardness <32 HRC (< 301 HBW - < 318 HV)
MATERIAL MANUFACTURER WITH AN ISO 9001:2015 MANAGEMENT SYSTEM APPROVED WITH CERTIFICATE NO. IT248115-2 BY BUREAU VERITAS ACCREDITATION BODY
IN ACCORDANCE WITH PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU ANNEX 1 POINT 4.3.
MATERIAL CHARACTERISTICS COMPLY WITH POINT 7.5 OF ANNEX I TO PED BY HAVING AN ELONGATION AFTER RUPTURE AT TENSILE TEST NO LESS THAN 14%
AND A BENDING RUPTURE ENERGY AT IMPACT TEST NO LESS THAN 27 J AT 20°C.

WE CERTIFY THAT THE DELIVERED PRODUCTS COMPLY WITH THE ORDER

TRADE MARK	ISSUED BY A. ARCELLI	VERIFIED BY G. RAIMONDI	INSPECTOR	INSPECTOR
DATE 17/10/2024			DATE	DATE

Protocol: CTCERC20240000591 * CERTIFIED TRUE COPY
* Issued 18-10-2024

fittinox PIPE FITTINGS SOLUTIONS
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RAPPORTO CONTROLLO CON LIQUIDI PENETRANTI
LIQUID PENETRANT EXAMINATION
RAPPORT D'EXAMEN PAR RESSUAGE

24C0357/02-PTR
Rev.0
17/10/2024
Page 1 to 2
PTR

CLIENTE: Purchaser / Client	RACCORTUBI S.p.A.	**ORDINE CLIENTE:** P.O. / Commande du Client:	00006099
COMMESSA FTX: FTX Job / Commande FTX:	24C0357	**PROGETTO:** Project / Projet:	N/A
LIVELLO QUALITÁ: Quality Level / Niveau de Qualité:	N.A.	**PROCEDURA No.:** Procedure no. / Procedure no.	PI 6 Rev.4
PIANO QUALITÁ No: ITP No. / PQ No.:	N/A	**FASE:** Phase / Phase	N.A.
SPECIFICHE: Specifications No / Specifications No:	ASTM A182/A182M-23 F55 / MDS D54 / ISO 17781		
NORME DI PROCEDIMENTO: Testing STD / Normes de procedure	N.A.		

POS. FTX FTX Pos / Pos. FTX	ART. CLIENTE Cl. Item / Cl. Article	QTÁ Q.ty / Q.té	DESCRIZIONE Description / Description	GRADO MATERIALE Mat. Grade / Nuance	COLATA Heat / Coulée	CODICE Heat Code / Cod Coulèe	LOTTO Lot / Lot	NUMERO SAGGIO Test Number / Numero de temoin
0002	2	1	NIPOFLANGE REINFORCED D.4" x 1 1/2" THK 3.05mm / 3.68mm 150# RF ASTM A182 F55 - ITEM 28	F 55	712578			TN01211
0003	3	1	FLANGIA GREZZA D.1 1/2" 150# RF ASTM A182 F55 PER PROVE POS.2	F 55	712578			TN01211

TECNICA UTILIZZATA: Tecniques used / Technique utilisée:	**LIQUIDI PENETRANTI LAVABILI CON ACQUA** Visible penetrant examination - Water washable / Liquides pénétrants lavables à l'eau		
MEZZO DI ILLUMINAZIONE UTILIZZATO: Light medium used / éclairage utilisé	**LAMPADA A LUCE BIANCA (1076 LUX MINIMO)** White lamp / Lamp à lumière blanche		
CONDIZIONI SUPERFICIALI: Surface Conditions / État de surface	**LAVORATA DI MACCHINA-SABBIATA Ra ≤ 6,3 µm** Machined - Sandblasted / Usiné - sablée		
TEMPERATURA DEI PEZZI: Pieces temperature / Température des pieces	**16 ÷ 30 °C**		
PULIZIA INIZIALE Initial cleaning / Nettoyage préliminaire	**DETERGENTE IN ACQUA CALDA** Detergent in hot water / Détergent dans l'eau chaude	**PULIZIA FINALE** Final cleaning / Nettoyage final.	**ACQUA** Water / Eau
MARCA E TIPO DI PENETRANTE: Trademark & type penetrant / Marque et type de pénétrant	**NDT ITALIANA MET-L-CHEK VP 30 "VISIBLE"**	**LOTTO DI PRODUZIONE No.** Batch no. / Lot no.	**18268**
MARCA E TIPO RIVELATORE: Trademark & type developer / Marque et type de révélateur:	**NDT ITALIANA MET-L-CHEK D70**	**LOTTO DI PRODUZIONE No.** Batch no. / Lot no.	**18267**
APPLICAZIONE PENETRANTE: Penetrant application / Application du pénétrant	**IMMERSIONE** Immersion / Immersion		
APPLICAZIONE RIVELATORE: Developer Application / Application du révélateur	**NEBULIZZAZIONE** Spraying / Pulverisation		
MEZZO DI RIMOZIONE: Removal means / Produit de nettoyage	**ACQUA** Water / Eau		
TEMPO DI SVILUPPO: Developing time / Durée de révélation	**12 ÷ 18 MINUTI** Minutes / Minutes		
TEMPO DI PENETRAZIONE: Penetration Dwell time / Durée de pénétration	**25 MINUTI** Minutes / Minutes		
CRITERI DI ACCETTABILITÁ Acceptance criteria / critères d'acceptation	**ASME VIII Div. 1 - App. 8**		

	OPERATORE Operator - Operateur	UFFICIO QUALITÁ Quality Dpt. – Quality departement	ISPETTORE CLIENTE Client's Inspector – Inspection client
NOME-Name / Nom: **DATA**-Date / Date: **FIRMA** – Signature / Signature:	J. VILLAFUERTE 11/10/2024	A. ARCELLI 17/10/2024	

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 28 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM A182 Gr.F55 4"x1.1/2" thk 3,05mmX3,68mm

raccortubi Heat num. or Pcs. marking: 712578 - Qty:1,00

Protocol: CTCERC202400009591 * CERTIFIED TRUE COPY
* Issued 18-10-2024

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RAPPORTO CONTROLLO CON LIQUIDI PENETRANTI
LIQUID PENETRANT EXAMINATION
RAPPORT D'EXAMEN PAR RESSUAGE

24C0357/02-PTR
Rev.0
17/10/2024

PTR

ESTENSIONE DELL'ESAME: Examination coverage / Couverture de l'examen	**100% DELLE SUPERFICI INTERNE ED ESTERNE ACCESSIBILI** 100% of internal and external accessible surfaces / 100% des surfaces accessibles
INDICAZIONI RILEVANTI: Recordable indications / Indications relevée	**NESSUNA** None / Aucune

DECISIONE - Decision – Decision			
CONFORME Conforming / Conforme	☑	**NON CONFORME** Non conforming / Non-Conforme	

SCHIZZO - Sketch / Représentation			
SI – Yes / Oui		**NO** – No / Non	☑

NOTE – Remarks - Observations

	OPERATORE Operator - Operateur	**UFFICIO QUALITÁ** Quality Dpt. – Quality departement	**ISPETTORE CLIENTE** Client's Inspector – Inspection client
NOME-Name / Nom: **DATA**-Date / Date: **FIRMA** – Signature / Signature:	**J. VILLAFUERTE** 11/10/2024	**A. ARCELLI** 17/10/2024	

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 28 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

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RAPPORTO DI CONTROLLO VISIVO-DIMENSIONALE E MARCATURA
VISUAL DIMENSIONAL AND MARKING REPORT
RAPPORT DE CONTROLE VISUEL –DIMENSIONNEL ET MARQUAGE

24C0357/02-VDM
Rev.0
17/10/2024
Page 1 to 1
VDM

CLIENTE: Purchaser / Client	RACCORTUBI S.p.A.	**ORDINE CLIENTE:** P.O. / Commande du Client:	00006099
COMMESSA FTX: FTX Job / Commande FTX:	24C0357	**PROGETTO:** Project / Projet:	N/A
LIVELLO QUALITÁ: Quality Level / Niveau de Qualité:	N.A.	**PROCEDURA No.:** Procedure no. / Procedure no.	PI 47 Rev.4 - PI 52 Rev.2 - PI 28 Rev.4
PIANO QUALITÁ No: ITP No. / PQ No.:	N/A	**FASE:** Phase / Phase	N.A.
SPECIFICHE: Specifications No / Specifications No:	ASTM A182/A182M-23 F55 / MDS D54 / ISO 17781		
NORME DI PROCEDIMENTO: Testing STD / Normes de procedure	N.A.		

POS. FTX FTX Pos / Pos. FTX	ART. CLIENTE Cl. Item / Cl. Article	QTÁ Q.ty / Q.té	DESCRIZIONE Description / Description	GRADO MATERIALE Mat. Grade / Nuance	COLATA Heat / Coulée	CODICE Heat Code / Cod Coulèe	LOTTO Lot / Lot	NUMERO SAGGIO Test Number / Numero de temoin
0002	2	1	NIPOFLANGE REINFORCED D.4" x 1 1/2" THK 3.05mm / 3.68mm 150# RF ASTM A182 F55 - ITEM 28	F 55	712578			TN01211
0003	3	1	FLANGIA GREZZA D.1 1/2" 150# RF ASTM A182 F55 PER PROVE POS.2	F 55	712578			TN01211

METODO UTILIZZATO: Examination method / Méthode utiliséè	**METODO DIRETTO** Direct method / Methode directe
STRUMENTI UTILIZZATI: Used Equipments / Instruments utilisés	**173C ; 181C ; 143C**
CRITERI DI ACCETTABILITÁ Acceptance criteria / critères d'acceptation	**ASME B16.9-2018 - ASME B16.25-2017**

DECISIONE - Decision – Decision

CONFORME Conforming / Conforme	☑	**NON CONFORME** Non conforming / Non-Conforme	

SCHIZZO - Sketch / Représentation

SI – Yes / Oui		**NO** – No / Non	☑

NOTE – Remarks - Observations

	OPERATORE Operator - Operateur	UFFICIO QUALITÁ Quality Dpt. – Quality departement	ISPETTORE CLIENTE Client's Inspector – Inspection client
NOME-Name / Nom: **DATA**-Date / Date: **FIRMA** – Signature / Signature:	FITTINOX S.r.l. UFF. QUALITÀ DEPT. A. DONVITO **A. DONVITO** 11/10/2024	FITTINOX S.r.l. UFF. QUALITÀ DEPT. A. ARCELLI **A. ARCELLI** 17/10/2024	

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 28 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM A182 Gr.F55 4"x1.1/2" thk 3,05mmX3,68mm

raccortubi Heat num. or Pcs. marking: 712578 - Qty:1,00

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raccortubi Heat num. or Pcs. marking: 712578 - Qty:1.00
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Order: 1724001267 - 24.06.24 - Item n.: 28 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002823
Protocol: CTCERC2024000009591 * CERTIFIED TRUE COPY * Issued 18-10-2024
CTCERT2024000006889.4.0001

SIDERTEST
mechanical chemical non destructive tests
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U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

G48ACE 25211 / 24

Rif. Lab SIM (FCP) : **8155 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/ Customer	Ordine/ Order	Commessa/ Job
Fittinox Srl V. Copernico, 34/36 29027 Podenzano PC	**FPO-0003948**	**O0018272**

Subcliente/ Subcustomer **KADDAS OILFIELD SERVICES**

Campione fornito da cliente/ Sample supplied by customer :Parte del prodotto finito/ part of finished product

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
TEST SAMPLE Ø 120 mm	1		**712578-L7987**	**712578-L7987**	**ASTM A 815-23 UNS S32760**

Prova di "pitting" in ferro-cloruro/ Ferric chloride pitting test [Decision rule: Qn]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimensioni/ Dimension mm Lunghezza/ Length	Larghezza/ Width	Spessore/ Thickness	Area/ Area cm²	
138083	ASTM G48 11 (R2020)e1 Method A	**ISO 17781:2017**	B L UP	Chimica/ Chemical	48,29	26,71	12,07	43,90	[(LxWx2)+(WxTx2)+(LxTx2)] / 100

Condizioni superficiali/ Surface condition	Pulizia chimica/ Chemically cleaned
Temperatura di prova/ Test temperature (°C)	50
Tempo di esposizione (ore)/ Exposure time (hours)	24

Data e ora inizio/ Initial date and time	Data e ora fine/ End date and time
15/10/2024 13:34:39	16/10/2024 13:34:39

Soluzione/ Solution FeCl3 6% SOLUTION

Peso iniziale/ Initial weight (g)	122,7815	
Peso finale/ Final weight (g)	122,7813	
Perdita di peso/ Weigth loss (g)	0,0002	
Perdita di massa/ Specimen mass loss	< 0,1	g/m²
Limite perdita di massa max/ Limit Specimen mass loss max	**1.0**	**g/m²**

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X/ NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata A/ Examined area A	cm²	25,80
Area esaminata B/ Examined area B	cm²	25,80

Note Tecniche/ Technical Notes: Pickling: 20% HNO3+5% HF, 60°C, 5 Minutes

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival	**11/10/2024**	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
Data Rapporto di prova/ Test Report Date	**17/10/2024** firmato elettronicamente/electronically signed	*Antonielli Stefano*	*Amani Paolo*		

DECISION RULE:
- Ql → Qualitative
- Qs → Semi-quantitative
- Qn → Quantitative (Implicit Uncertainty)
- Qi → Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.

The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [L]-long.; [UP]-external sup.

raccortubi Heat num. or Pcs. marking: 712578 - Qty:1,00
Customer: ROSETTI MARINO S.p.A.
Description: NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM A182 Gr.F55 4"x1.1/2" thk 3.05mmX3.68mm
Order: 1724001267 - 24.06.24 - Item n.: 28 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823
Protocol: CTCERC202400009591 * CERTIFIED TRUE COPY
* Issued 18-10-2024
CTCERT202400006889.4.0002

SIDER TEST Srl
Mechanical and Chemical Laboratory Non Destructive Tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it
www.sidertest.it *Your Strategic Partner in Material Testing!*

RAPPORTO DI PROVA/TEST REPORT

E562 13139 / 19

Rif. Lab SIM (FCP) : **4253 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Fittinox Srl V. Copernico, 34/36 29027 Podenzano PC**

Subcliente/Subcustomer **KADDAS OILFIELD SERVICES**

Ordine/Order **FPO-0003948**

Commessa/Job **O0018272**

Campione fornito da cliente Sample supplied by the Customer :Parte del prodotto finito' part of finished product

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
TEST SAMPLE Ø 120 mm	1		712578-L7987	712578-L7987	ASTM A 815-18 UNS S32760

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti/ Determining volume fraction by systematic manual point count

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Ingrandimento/ Enlargement	Misura del reticolo/ Grid size	Data esecuzione/ Date of Testing
68552	ASTM E 562-11	MESC SPE 76/203 (2012)	B T 1/2	20% NaOH	400 X	40 mm x 40 mm 5 x 5 = 25 Points	14/06/2019

	Valore Min/ Value Min	Valore Max/ Value Max
Ferrite Vv (% Frazione di volume)/ Vv(% Volume Fraction) 46.5	40	60

s 4,5 95% C.I. 1,7 %RA 3,65

Ferrite % Frazione di volume per ciascun campo esaminato/ % Volume Fraction for each metallographic section

1	42	2	54	3	52	4	42	5	52
6	48	7	50	8	42	9	52	10	44
11	52	12	54	13	44	14	42	15	42
16	44	17	52	18	44	19	42	20	52
21	44	22	40	23	46	24	44	25	40
26	50	27	48	28	42	29	46	30	50

Nr. di campi per provino/sezione/spaziatura/angolo/ Nr. of fields for specimens/section/angle 30 / 20 x 20 mm / 3 x 3.0 mm / 45°

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

INSPECTION SERVICES
DNV·GL
Inspector no.: 32-486
Date: 14 JUN. 2019
Signature:
☒ Witnessed ☐ Reviewed

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The "symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
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Data Ingresso Materiale/ Date of Material Arrival	03/06/2019	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
Data Rapporto di prova/ Test Report Date	14/06/2019	*Antonielli Stefano*	*Amani Paolo*

Ispettori/Inspector
WITNESSED NOTED REVIEWED
SURVEYOR M. CAMPELLI
DATE 14/6/19

Cliente/Customer ☐ Witness ☐ Review
TÜV NORD Italia
14 JUN 2019 Name:

[Test Position Legend: [1/2]-1/2 thickness; [B]-Specimen in Base Material; [T]-trasv

raccortubi Heat num. or Pcs. marking: 712578 - Qty:1,00
Customer: ROSETTI MARINO S.p.A.
Description: NipoFlange Reinforced Manuf.s STD 150LB RF FRG ASTM A182 Gr.F55 4"x1.1/2" thk 3,05mmX3,68mm
Order: 1724001267 - 24.06.24 - Item n.: 28 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002823
Protocol: CTCERC20240000591 * CERTIFIED TRUE COPY
* Issued 18-10-2024

SIDER TEST Srl
Mechanical and Chemical Laboratory Non Destructive Tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
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RAPPORTO DI PROVA/TEST REPORT

MIC 13139 / 19

Rif. Lab SIM (FCP): **4253 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Fittinox Srl V. Copernico, 34/36 29027 Podenzano PC**

Ordine/Order **FPO-0003948**

Commessa/Job **O0018272**

Subcliente/Subcustomer **KADDAS OILFIELD SERVICES**

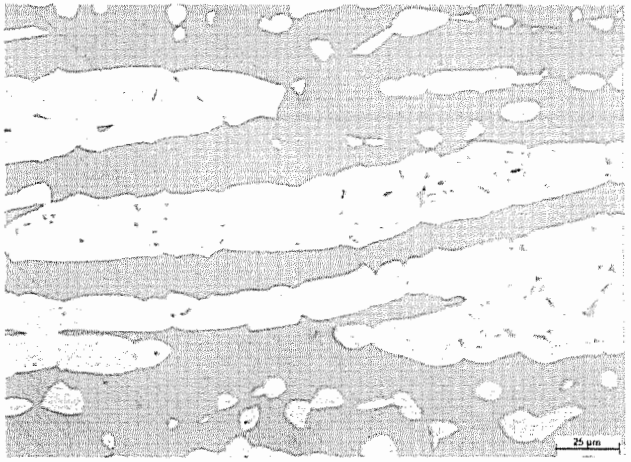
Campione fornito da cliente Sample supplied by the Customer :Parte del prodotto finito: part of finished product

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
TEST SAMPLE Ø 120 mm	1		**712578-L7987**	**712578-L7987**	**ASTM A 815-18 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
68553	ASTM E 3-11(2017)+ASTM E 407-07(2015)e1	MESC SPE 76/203 (2012)	B T 1/2	14/06/2019

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
400 X	20% NaOH	Materiale base / Base Material 20,0 x 20,0 = 400,0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

DNV-GL INSPECTION SERVICES
Inspector no.: 32-486
Date: 14 GIU. 2019
Signature:
☑ Witnessed ☐ Reviewed

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente', che eseguo il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova,Il simbolo * antecedente a "ID_Provi" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer, Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report. The * Symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
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Data Ingresso Materiale/ Date of Material Arrival	03/06/2019	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
Data Rapporto di prova/ Test Report Date	14/06/2019	*Antonielli Stefano*	*Amani Paolo*

Ispettore/Inspector
WITNESSED NOTED REVIEWED
SURVEYOR M. CAMPELLI
DATE 14/6/19

Cliente/Customer ☑ Witness ☐ Review
Date: 14 JUN 2019 Name:

Test Position Legend: [1/2]-1/2 thickness; (B)-Specimen in Base Material; (T)-trans

SIDERTEST
mechanical chemical non destructive tests
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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

A923A 25791 / 24

Rif. Lab SIM (FCP): 8283 / 24 (A / A)

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Cliente/ Customer	Raccortubi Spa Viale De Gasperi, 194 20010 Marcallo con Casone MI	Ordine/ Order	Commessa/ Job
Subcliente/ Subcustomer	ROSETTI MARINO SPA	123A90A	2823 (PP09591)

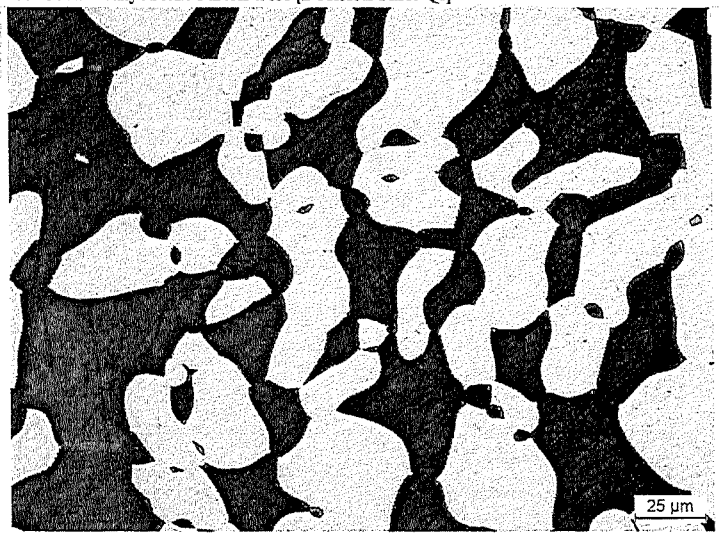
Campione fornito da cliente/ Sample supplied by customer :Parte del prodotto finito/ part of finished product

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
NipoFlange 4" X 1.1/2" W.T. 3.05 x 3.68 mm	1		1243	712578	ASTM A 182-23 F55

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio/ Detecting Detrimental Intermetallic Phase: Sodium Hydroxide Etch Test [Decision rule: Ql]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
140749	ASTM A923 – 23 Method A	Job 2823	B T FT	24/10/2024

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
400 X	40g NaOH to 100g distilled water	Specimen in Base Material



Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure.

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival	Data Rapporto di prova/ Test Report Date	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
21/10/2024	24/10/2024	Antonielli Stefano	Amani Paolo		

firmato elettronicamente/electronically signed

DECISION RULE:
- Ql — Qualitative
- Qs — Semi-quantitative
- Qn — Quantitative (Implicit Uncertainty)
- Qi — Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment. The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724001267	123A90A	Q012400890

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **24.10.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 17/10/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00009048
Packing list	PLPLIS202400008996
Ns. Rif.	00002823
Vs. Rif.	1724001267 - 24.06.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards
raccortubi

raccortubi

00009048

11/10/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
2	5	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F55 3/4"	MA2 CTCERT202400006446_1.0001.TIF CTCERT202400006446_2.0001.TIF CTCERT202400006446_2.0002.TIF CTCERT202400006446_2.0003.TIF CTCERT202400006446_2.0004.TIF CTCERT202400006446_2.0005.TIF CTCERT202400006446_2.0006.TIF CTCERT202400006446_2.0007.TIF
25	5	Nipple L=100mm ASME B36.19M THRD-M NPT x PE SML ASTM A790 UNS S32760 3/4" thk 2,87mm	TL6 CTCERT202400006448_1.0001.TIF CTCERT202400006448_2.0001.TIF CTCERT202400006448_2.0002.TIF CTCERT202400006448_2.0003.TIF CTCERT202400006448_2.0004.TIF CTCERT202400006448_2.0005.TIF CTCERT202400006448_2.0006.TIF CTCERT202400006448_2.0007.TIF

raccortubi

00009048

11/10/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 11/10/2024
Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				RACCORDI FORGIATI SEC. ASTM A-182 F55 UNS S32760 DIMS SEC. ANSI B16.11	
2	NR	5	0.00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F55 3/4''	MA2
				NIPPLI DA TUBO ASTM/ASME A/SA-790 UNS S32760	
25	NR	5	0.00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE SML ASTM A790 UNS S32760 3/4'' thk 2,87mm	TL6

RACCORDI SECONDO / FITTINGS IN ACC. TO

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill
005	5	N. TUBO 40 3/4"x4"(100mm) PE/NPT UNS S32760	UNS-S32760	TL6	56017	SCHOELLER BLECKM

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co
0,0140	0,6300	0,3000	0,0280	0,0010	6,7700	25,9200	3,7700	0,0000	0,0000	0,0000	0,7400	0,0000	0,2680	0,0000	0,

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending T.	Flatting T.	Hydraulic T.	1^HBW Hardness	2^HBW Hardness	1^ Impact/cm2	2^ Impact/cm2
928	716	35			OK		175	178		

RACCORDI SECONDO / FITTINGS IN ACC. TO

The values of chemical analysis are a true and correct copy of the steel mill test certificate.
The mechanical tests are the correct records of the certificate issued from the company that has executed the last transformation of the material.
We declare that the certified material complies with the above standards and to the client's order requirements.

ANNUAL BOOK OF ASTM STANDARDS - 2024
MATERIAL DUAL CERTIFIED ASTM/ASME SEC. II PART A ED. 2023
MATERIAL MANUFACTURER APPROVED BY LRQA CERT. NR. 00300

ENTE COLLAUDO / TPI INSPECTOR

C. QUALITA' / QUALITY CONTROL
O.M.S.A. SRL
Barbara Orlandi

Barbara Orlandi

Order: 1724001267 - 24.06.24 - Item n.: 2 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002823

NPT 3000# FRG ASTM A182 Gr.F55 3/4"

cs. marking: MA2 - Qty:5,00

Protocol: CTCERC20240009048 * CERTIFIED TRUE COPY
* Issued 17-10-2024

SURFACE FINISH: 2B Cold Finished
PRODUCT DELIVERY CONDITION: RS SOLUTION ANNEALED
PRODUCT DIMENSIONS (mm): 40,000 LENGTH (mm)
GRADE: F55 UNSS32760 1.4501 INTERNAL GRADE:
IDENTIFICATION HEAT NO: 770071 IDENTIFICATION LOT
MARKING OF THE PRODUCT: 1.4501 TEST PIECE N:

REFERENCE NORMS:EN 10088-3, EN 10272, ASTM A276/ASME SA276, ASTM A479/ASME SA479, ISO15156
NORSOK M-650 REV.4/M-630 MDS D57 REV.5 QTR04 (up to 101.6mm), QTR05 (101.61-250mm). REFI
EN 10222-5, ASTM A182/ASME SA182, ASTM A484
HEAT TREATMENT: SOLUBILIZATION 1100 ° C 1.5 min / mm COOLING WATER TEMPERATURE BELOW 260
ASTM G48 A/ASTM A923 C TESTING CONDITIONS: Sample surface 120 GRIT, Solution 100g FeCl3.6I
20X.
STEELMAKING EAF + AOD + CONTINUOUS CASTING
HOT ROLLED
REDUCTION RATIO 39,1

CHEM. COMP. (%W/W) - LADLE ANALYSIS ACCORDING TO ASTME1019-A751-E1086-E415-A580
Control lot No. - Weight :020000685670 - 81.533 KG

ELEMENTS	C	Si	Mn	P	S	N
OBTAINED	0,014	0,35	0,59	0,019	0,0008	0,26

ELEMENTS	W	CV_F8
OBTAINED	0,54	41

CV_F8 = CR+(3.3*MO)+(16*N2)

HARDNESS TEST IN AS DELIVERY CONDITION
Control lot No. - Weight :020000690464 - 1.780 KG
SPECIFICATION ENISO6506 HARDNESS TEST HB TESTING
OBTAINED 235

IMPACT TEST IN AS DELIVERY CONDITION
Control lot No. - Weight :020000690464 - 1.780 KG
SPECIFICATION EN ISO 148-1-KV2 DIRECTION OF TH
TYPE OF TEST PIECE KV
TEST TEMPERATURE °C 20
MEASUREMENT UNIT J
OBTAINED 298 297 298

Prot.
Data

659/996

Order: 1724001267 - 24.06.24 - Item n.: 2 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823
Protocol: CTCERC20240009048 * CERTIFIED TRUE COPY * Issued 17-10-2024

OBTAINED				810	557	78,5	43,2	

CORROSION
Control lot No. - Weight :020000690464 - 1.780 KG
SPECIFICATION ASTM G48 A
OBTAINED 0,0138

FERRITE %
Control lot No. - Weight :020000690464 - 1.780 KG
SPECIFICATION ASTME562 --
OBTAINED 41,88

MICROSTRUCTURE
Control lot No. - Weight :020000690464 - 1.780 KG
SPECIFICATION -- --
SATISFACTORY
OBTAINED -

LATERAL EXPANSION
Control lot No. - Weight :020000690464 - 1.780 KG
SPECIFICATION ASTMA370 --

OBTAINED	2,5	2,6	2,5

SHEAR %
Control lot No. - Weight :020000690464 - 1.780 KG
SPECIFICATION ASTMA370 --

OBTAINED	100	100	100

HARDNESS TEST
Control lot No. - Weight :020000690464 - 1.780 KG
SPECIFICATION ASTMA370-E18 HARDNESS TEST HRC TESTING
OBTAINED 24

Prot. Nr
Data

Order: 1724001267 - 24.06.24 - Item n.: 2 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002823

Protocol: CTCERC20240009048 * CERTIFIED TRUE COPY
* Issued 17-10-2024

ss. marking: MA2 - Qty:5,00

NPT 3000# FRG ASTM A182 Gr.F55 3/4"

TENSILE TEST
Control lot No. - Weight :020000690464 - 1.780 KG
SPECIFICATION EN-ISO6892-1 DIRECTION OF TH

	Rm_C	Rp02_C	A	Z_C
MEASUREMENT UNIT	MPA	MPA	%	%
			5.0 D	
OBTAINED	818	552	39,0	78,1

STEELMAKING EAF + AOD + CONTINUOUS CASTING
HOT ROLLED
METALLOGRAPHIC INSPECTION ACCORDING TO ASTM A923 METHOD A: SATISFACTORY.
IMPACT TEST VALUES AT -46°C ARE NOT LESS THAN THOSE AT -50°C HERE STATED.
QTC ON PROLONGATION OF BARS TESTS AT MID RADIUS (CENTER POS. FOR SIZES <2 INCHES).
ASTM A484 DOES NOT APPLY FOR SIZE AND LENGTH TOLERANCES.
MARKING: PRODUCER LOGO, MATERIAL NO, HEAT NO, LOT NR.
ALL THE NORMS MENTIONED ARE INTENDED IN THEIR LAST REVISION AT THE DATE OF ISSUE OF THIS I
COUNTRY OF ORIGIN: ITALY, THE MATERIAL COMPLIES WITH FAR DFARS
252.225-7009 ALT 1.
THE PRODUCT SATISFIES CE DIRECTIVES: 2011/65 (ROHS2) - 2000/53 - 2002/95(RoHS) - 2003/11 -
THE MATERIAL IS FREE OF ANY MERCURY, MERCURY COMPOUNDS AND OR RADIUM CONTAMINATION AT TIME
USING OZONE DEPLETING SUBSTANCES OF CLASS I AND II.
VISUAL SURFACE INSPECTION AND EDDY CURRENT WITH ROTATING HEAD ACCORDING TO EN 10277-1 Clas
ACCORDING TO EN 10278 : SATISFACTORY . ULTRASONIC TEST IN ACCORDING TO EN 10308 , Class 3
CONTROL WITH PORTABLE PRODUCT : SATISFACTORY . NOT BEEN MADE BY ANY REPAIR MATERIAL WELDIN
CORROSION TEST ACCORDING TO ASTM A262 Method E EN ISO 3651-2: SATISFACTORY. NO CRACKS AT 2

Prot. Nr. 917
Data 06/04/

DATE 31.08.2017 ANTONIO CARMELO CREA FC(QUALITY CERTIFICATOR) - ELECTR

cs. marking: MA2 - Qty:5,00
NPT 3000# FRG ASTM A182 Gr.F55 3/4"
Order: 1724001267 - 24.06.24 - Item n.: 2 - Project: 123A90A - Base Load Power Hub Platform - Our ref.:
OCVEIT20240002823
Protocol: CTCERC20240009048 * CERTIFIED TRUE COPY
* Issued 17-10-2024

COGNE ACCIAI SPECIALI S.p.a.
Via Paravera, 16
I-11100 AOSTA

MICROPHOTO
МИКРОСЪЁМКА

All.N 1

MARCA *NUANCES* *WERKESTOFF* *GRADE* *МАРКА*	329S	*LOTTO DI CONTROLLO* *LOT DE CONTRÔLE* *LAUFKARTE* *CONTROL LOT* *ПАРТИЯ КОНТРОЛЯ*	020000690464
COLATA *COULEE* *SCHMELZE* *HEAT* *ПЛАВКА*	770071	*REAGENTE* *RÉACTIF* *REAGENS* *ETCHANT* *РЕАГЕНТ*	20 % NaOH electrolyte
TIPO DI APPARECCHIO *TIPE D'APPAREIL* *PRUEFGERAT TYP* *INSTRUMENT TYPE* *ТИП АППАРАТА*		**MICROSCOPE – LEICA** **MEF4M МИКРОСКОП**	
INGRANDIMENTO *AGRANDISSEMENT* *VERGRÖSSERUNG* *ENLARGEMENT* *УВЕЛИЧЕНИЕ*		**400 X**	

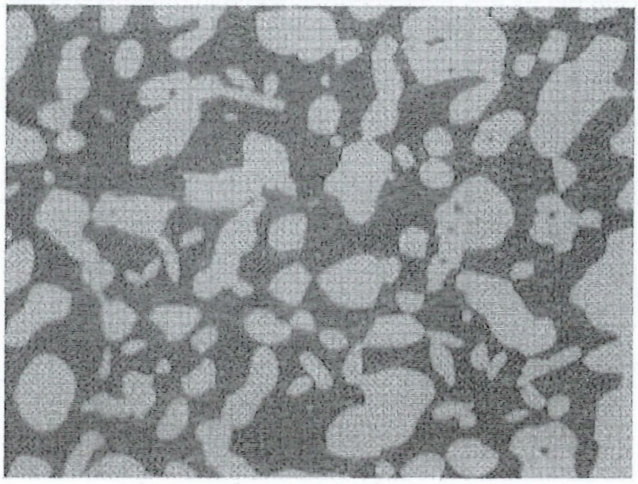
DIREZIONE D'ESAME
DIRECTION D'EXAMEN
PRUEFRICHTUNG
SCANNING DIRECTION
НАПРАВЛЕНИЕ
ПРИ ИССЛЕДОВАНИИ

☐ LONGITUDINALE - LONGITUDINAL - ПРОДОЛЬНОЕ

☒ TRASVERSALE – TRANSVERSAL – KREUZEND-ПОПЕРЕЧНОЕ

Codice colata ... Quality Control ... Barbara Orlandi
Prot. Nr. 9173
Data 06/04/18

PHOTO (ELECTRONIC IMAGE) – ФОТОСНИМКИ (ЭЛЕКТРОННОЕ ИЗОБРАЖЕНИЕ)



NOTE:
ПРИМЕЧАНИЯ:
"Free from Intermetallic Phases"

FIRMA / UNTERSCHRIFT / SIGNATURE / ПОДПИСЬ	DATA / DATUM / DATE / ДАТА
Christian Del Guerra	24/06/17

Mod.Micro Rev.4

COGNE ACCIAI SPECIALI S.p.a.
Via Paravera, 16
I-11100 AOSTA

MICROPHOTO
МИКРОСЪЁМКА

All.N 2

MARCA *NUANCES* *WERKESTOFF* *GRADE* *МАРКА*	329S	*LOTTO DI CONTROLLO* *LOT DE CONTRÓLE* *LAUFKARTE* *CONTROL LOT* *ПАРТИЯ КОНТРОЛЯ*	020000690464
COLATA *COULEE* *SCHMELZE* *HEAT* *ПЛАВКА*	770071	*REAGENTE* *RÉACTIF* *REAGENS* *ETCHANT* *РЕАГЕНТ*	20 % NaOH electrolyte
TIPO DI APPARECCHIO *TIPE D'APPAREIL* *PRUEFGERAT TYP* *INSTRUMENT TYPE* *ТИП АППАРАТА*		**MICROSCOPE – LEICA** **MEF4M МИКРОСКОП**	
INGRANDIMENTO *AGRANDISSEMENT* *VERGRÖSSERUNG* *ENLARGEMENT* *УВЕЛИЧЕНИЕ*		**500 X**	

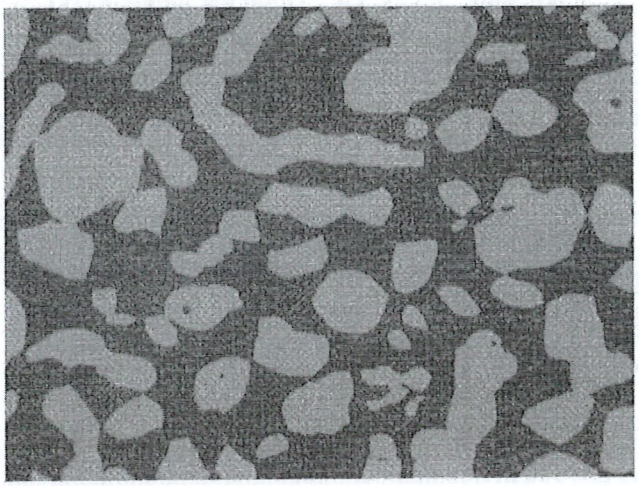
DIREZIONE D'ESAME
DIRECTION D'EXAMEN
PRUEFRICHTUNG
SCANNING DIRECTION
НАПРАВЛЕНИЕ
ПРИ ИССЛЕДОВАНИИ

☐ LONGITUDINALE - LONGITUDINAL - ПРОДОЛЬНОЕ

☒ TRASVERSALE – TRANSVERSAL – KREUZEND-ПОПЕРЕЧНОЕ

Codice colata ...
Quality Control ...
Barbara Orlandi
Prot. Nr. 9173
Data 06/04/18

PHOTO (ELECTRONIC IMAGE) – ФОТОСНИМКИ (ЭЛЕКТРОННОЕ ИЗОБРАЖЕНИЕ)



NOTE:
ПРИМЕЧАНИЯ:
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FIRMA / UNTERSCHRIFT / SIGNATURE / ПОДПИСЬ	DATA / DATUM / DATE / ДАТА
Christian Del Guerra	24/06/17

Mod.Micro Rev.4

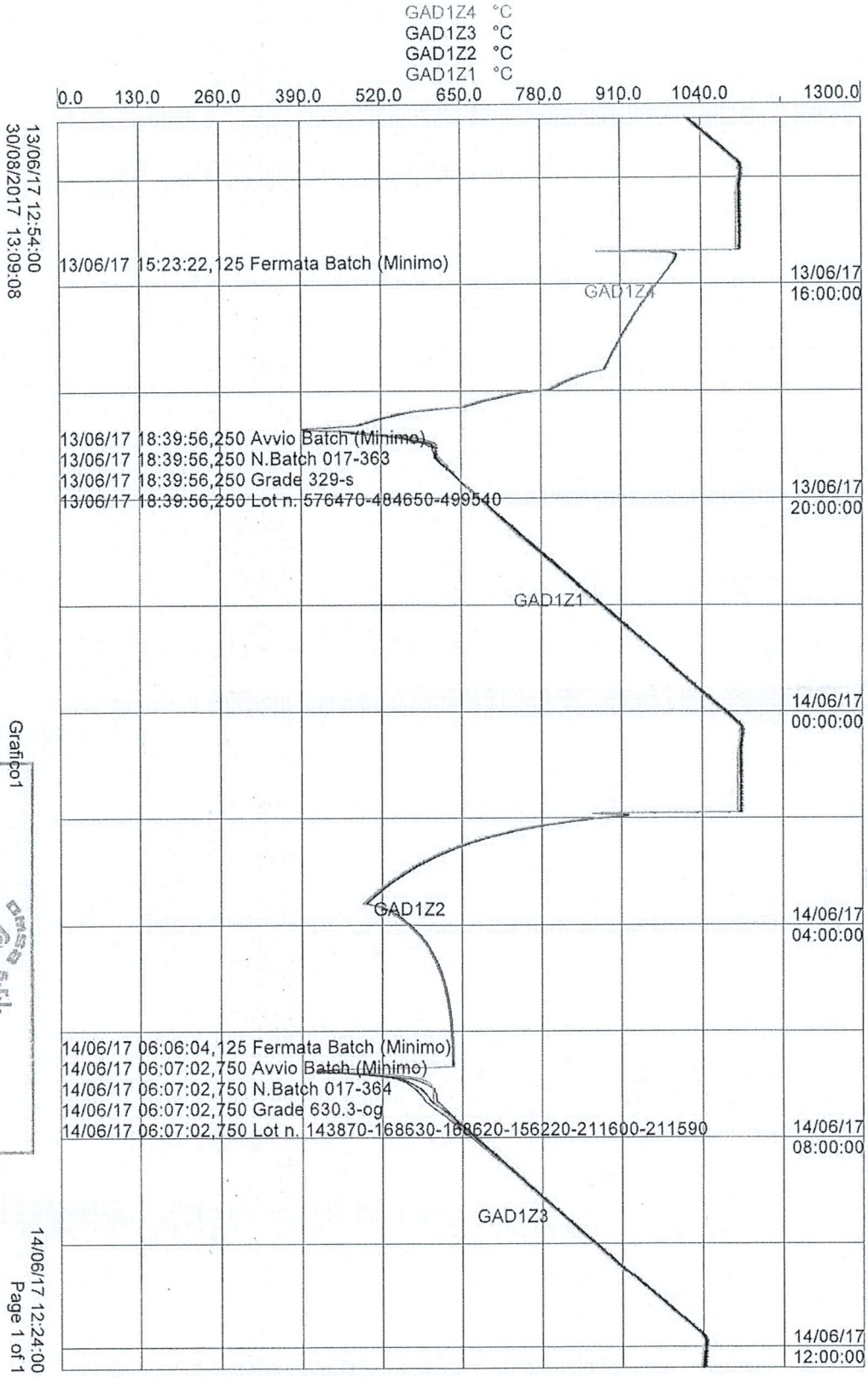
Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 2 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F55 3/4"

raccortubi Heat num. or Pcs. marking: MA2 - Qty:5,00

Protocol: CTCERC202400009048 * CERTIFIED TRUE COPY
* Issued 17-10-2024



Prot. Nr. 9123 Data 20/04/18 OMSS s.r.l. Codice colata MA2 Quality Control Barbara Orlandi

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 2 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F55 3/4"

raccortubi Heat num. or Pcs. marking: MA2 - Qty:5,00

Protocol: CTCERC202400009048 * CERTIFIED TRUE COPY
* Issued 17-10-2024

N.US.1024/17

COGNE ACCIAI SPECIALI S.p.a

CERTIFICATO DI COLLAUDO ULTRASUONI
CERTIFICAT DE CONTROLE PAR ULTRASONS
ULTRASCHALL PRUEFZEUGNIS
REPORT OF ULTRASONIC INSPECTION
ОТЧЕТ ОБ УЛЬТРАЗВУКОВОМ КОНТРОЛЕ

CLIENTE / CLIENTSGG / BESTELLER / CUSTOMER / ЗАКАЗЧИК		CONFERMA / CONFIRMATION / AUFTRAGSBESTRAKTIGUNG / CONFIRMATION / ПОДТВЕРЖД. ЗАКАЗА	
MARCA / NUANCES / WERKESTOFF / GRADE / МАРКА	329S W.No 1.4501	ORDINE / COMMANDE / AUFTRAG / ORDER / ЗАКАЗ	
SPECIFICA / SPECIFICATION / PRUKEVORSCHRIFT / SPECIFICATION / ТЕХ. ТРЕБОВАНИЯ	EN 10308 Cl 3	COLATA / COULEE / SCHMELZE / HEAT / ПЛАВКА	770071
		SCHEDA / LOT / LAUFKARTE / LOT / ПАРТИЯ	576470
PRODOTTO / PRODUIT / ERZEUGNISFORM / PRODUCT / ИЗДЕЛИЕ	Bars Ø 40 mm	STATO DI LAVORAZIONE / STADE DU PRODUIT / LIEFERZUSTAND / WORKING STEP / ОБРАБОТКА	PEELED SOLUTION TREATED
TIPO DI APPARECCHIO / TIPE / D'APPAREILPARUS / PRUEFGERAT TYP / INSTRUMENT TYPE / ТИП АППАРАТА	USN 58 L s/n 020N8M	COSTRUTTORE / CONSTRUCTEUR / BAUART / MAKE / ИЗГОТОВИТЕЛЬ	Krautkramer
TIPO DI SONDA / TIPE DE PALPEUR / PRUFKOPT / PROBETYPE / ТИП ЗОНДА	MSEB4S	FREQUENZA / FREQUENCE / FREQUENZ / FREQUENCY / ЧАСТОТА	4 MHz

DIREZIONE D'ESAME / DIRECTION D'EXAMEN / PRUEFRICHTUNG / SCANNING DIRECTION / НАПРАВЛЕНИЕ ПРИ ИСПЫТАНИИ

- ☒ RADIALE - RADIAL
- ☐ ASSIALE – AXIAL – AXIAL-(ANGLE)
- ☐ CIRCONFERENZIALE –CIRCOFERENTIAL – KREISLINIE – CIRCUMFERENTIAL

☐ MATRICOLA BLOCCO CAMPIONE / DENTIFICATION BLOC DE REFERENCE MUSTER BLOCK / MUSTER BLOCK / TEST BLOCK NR / № ОБРАЗЦА ДЛЯ ИСПЫТАНИЯ

☐ AVG SCALE / ECRANS ABAQUES AVG / AVG SKALEN / AVG SCALE / ШКАЛА AVG

☒ AVG DIAGRAMMI / DIAGRAMMES AVG / AVG DIAGRAMM / AVG DIAGRAM / ДИАГРАММЫ AVG

☒ V1 ☐ V2

Cogne s.r.l. Codice colata 770071 Quality Control Barbara Orlanini Prot.Nr. 9423 Data 06/09/17

RISULTATO DELL'ESAME / RESULTAT DE L' ESSAI / PRUEFERGERBNISSE / RESULT OF THE TEST / РЕЗУЛЬТАТ ИСПЫТАНИЯ

EXAM DATA:24/08/2017

INSPECTED NO 18 BARS

THE MATERIAL IS IN ACCORDANCE TO THE FOLLOWING SPECIFICATIONS:

EN 10308 Cl 3

L'ISPETTORE CND ZUSTANDIGER CND / L'INSPECTEUR CND CND INSPECTOR / ИНСПЕКТОР НРК	III LIV.CND / III УРОВЕНЬ НРК		DATA DATUM / DATE DATE / ДАТА
BAISOTTI MARCO Liv.II-ISO9712 N° Cert.20741/PND/C	OLIVERO DIMITRI Liv.III - EN473 N° Cert.23340/PND/C		30/08/2017

(Mod. Certus Rev. 4)

RACCORDI SECONDO / FITTINGS IN ACC. TO

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill
005	5	N. TUBO 40 3/4"x4"(100mm) PE/NPT UNS S32760	UNS-S32760	TL6	56017	SCHOELLER BLECKMA

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co
0,0140	0,6300	0,3000	0,0280	0,0010	6,7700	25,9200	3,7700	0,0000	0,0000	0,0000	0,7400	0,0000	0,2680	0,0000	0,

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending T.	Flatting T.	Hydraulic T.	1^HBW Hardness	2^HBW Hardness	1^ Impact/cm2	2^ Impact/cm2
928	716	35			OK		175	178		

RACCORDI SECONDO / FITTINGS IN ACC. TO

The values of chemical analysis are a true and correct copy of the steel mill test certificate.
The mechanical tests are the correct records of the certificate issued from the company that has executed the last transformation of the material.
We declare that the certified material complies with the above standards and to the client's order requirements.

ANNUAL BOOK OF ASTM STANDARDS - 2024
MATERIAL DUAL CERTIFIED ASTM/ASME SEC. II PART A ED. 2023
MATERIAL MANUFACTURER APPROVED BY LRQA CERT. NR. 00300

ENTE COLLAUDO / TPI INSPECTOR

C. QUALITA' / QUALITY CONTROL
O.M.S.A. SRL
Barbara Orlandi

Barbara Orlandi

Order: 1724001267 - 24.06.24 - Item n.: 25 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240002823

HRD-M NPT x PE SML ASTM A790 UNS S32760 3/4" thk 2,87mm

cs. marking: TL6 - Qty:5,00

Protocol: CTCERC20240009048 * CERTIFIED TRUE COPY
* Issued 17-10-2024

SCHOELLER BLECKMANN TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RÉCEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 723566 Page: 1 / 6	Rev:
Created on: Date: 17.12.2020	Modified on: 17.12.2020

SCHOELLER-BLECKMANN Edelstahlrohr GmbH
2630 Ternitz, Rohrstrasse 1
Austria

TL: +43 2630 316-810
FAX: +43 2630 316-894
E-MAIL: wolfgang.hecher@sber.co.at

CUSTOMER DESCRIPTION/DESCRIPCIÓN DEL CLIENTE/KUNDENBEZEICHNUNG/COMMETTANT

CLIENT SOLD TO/SOLICITANTE/AUFTRAGGEBER/COMMETTANT

TSS
TUBACEX SERVICE SOLUTIONS, S.A.U
POLIGONO INDUSTRIAL SARATXO
01470 AMURRIO
ESPAÑA

SOLD TO:RACCORTUBI S.P.A.
SOLD P.O. REF.:00000139 S
SOLD ORDER REF.:375848
COPY NUMBER: 008

CLIENT ORDER/PEDIDO CLIENTE/KUNDEN AUFTRAGSNUMMER/NO.DE COMMANDE: I008301
SALES ORDER/PEDIDO VENTAS/AUFTRAGSNUMMER/NO.DE COMMANDE D'USINE:

TÜV SÜD

Certified Management System acc. to ISO 9001, ISO 14001 and ISO 45001 by LRQA

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order#s requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

SCHOELLER-BLECKMANN EDELSTAHLROHR GMBH

Riegler

FR. N. RIEGLER
(WORKS INSPECTOR)

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 25 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: Nipple L=100mm ASME B36.19M THRD-M NPT x PE SML ASTM A790 UNS S32760 3/4" thk 2,87mm

raccortubi Heat num. or Pcs. marking: TL6 - Qty:5,00

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EN 10204:2004 / 3.1

Number: 723566 Page: 2 / 6	Rev:
Created on: Date: 17.12.2020	Modified on: 17.12.2020

MATERIAL:SEAML. STAINL. STEEL TUBES/PIPES/TUBOS INOXIDABLES SIN SOLDADURA/TUBES INOX SANS SOUDURE/NAHTLOSE EDELSTAHLROHRE
HEAT-TREATED, PICKLED / TRATADO, DECAPADO / HYPERTREMPE, DECAPE / WÄRMEBEHANDELT, GEBEIZT, PASSIVATED AS PER ASTM A380 / PASIVADO SEGUN ASTM A380 / PASSIVÉ (ASTM A380) / PASSIVIERT (ASTM A380)
GRADE / ACERO / GRADE / WERKSTOFF: 1.4501,S32760,
STANDARD / NORMA / STANDARD / LIEFERUNG NACH: EN 10216-5:2013 TC2
EN 10297-2:2005
NORSOK M650
NORSOK M630 REV.6 MDS D51 REV.5
ASME SECT.II PART.A SA790/SA790M-2019 ED.
ASTM A790/A790M-20
RTX_D51S REV.4
CHECK ANALYSIS
CORROSION TESTED ACC. TO ASTM A262 PRACTICE E
CORROSION TESTED ACC. TO ASTM A923 TEST METHOD C
CORROSION TESTED ACC. TO ASTM G48 TEST METHOD A
CORROSION TESTED ACC. TO EN ISO 3651-2 PRACTICE B
SHELL ES/247 REV.2 EXCEPT DPI (TABLE 1) AND SURFACE REQUIREMENTS (POINT 9.1)
QAD 68 REV.0
SHELL MESC SPE 74/014 FEBRUARY 2019 EXCEPT:
NO LIQUID PENETRANT TEST (POINT 14.12.1),
TENSILE TEST ONLY IN LONGITUDINAL DIRECTION.
ULTRASONIC TEST ONLY FOR LONGITUDINAL DEFECTS.
IMPACT TEST (if applicable): Lateral expansion 0.38 mm. minimum.
ANSI/NACE MR0103/ISO 17945:2015
ULTRASONIC TEST ACC. TO ASTM A999/A999M / ASTM E213
ANSI/NACE MR0175/ISO15156-3:2015
HYDROTEST
TOLERANCES / TOLERANCIAS / TOLERANCES / TOLERANZEN NACH: ASTM A999/A999M-18
EN ISO 1127/03.97 D3/T3
ASME SECT.II PART.A SA999/SA999M-2019 ED.
RANDOM LENGTHS / LARGOS VARIABLES / LONGUEUR COURANTE / EINGEENGTE LÄNGE 5.000/7.000 MM
PLAIN ENDS / LISOS / EXTRÉMITÉ D'EQUERRE / GLATTE ENDEN,
DIMENSIONS/DIMENSIONES/DIMENSIONS/DIMENSIONS: 26,67 X 2,87 MM / 3/4 " SCH 40S
COLD FINISHED/LAMINADOS EN FRIO/KALTGEFORMT/LAMINES A FROID

Sales Item Pos Ped. AuftrgPos Usine Pos	Client Item Pos Clnt Kunde Pos Com. Pos	Delivery No N° Entrega Lieferung Avis. d'exp	Lot No. N° lote Los Nr. Lot d`inspection	Heat No Colada Schmelze Coulée	Pieces Piezas Stück Pcs	Weight Peso Gewicht Poids	Tot Lgth Long. Tot Gesamtlänge Tolength	Un Lgth Long. Un Längentyp Long. Un
10		8170090068	283112	56017	6	57 KG	33,59 M	5000-7000 MM

RAW MATERIAL/DATOS MATERIAL/VORMATERIAL/MATIERE PREMIERE

Heat Nr:	Supplier	Method
56017	ACERALAVA (SPAIN)	Electric furnace+AOD

Certified Management System acc. to ISO 9001, ISO 14001 and ISO 45001 by LRQA

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SCHOELLER-BLECKMANN EDELSTAHLROHR GMBH

Riegler

FR. N. RIEGLER

(WORKS INSPECTOR)

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 25 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: Nipple L=100mm ASME B36.19M THRD-M NPT x PE SML ASTM A790 UNS S32760 3/4" thk 2,87mm

raccortubi Heat num. or Pcs. marking: TL6 - Qty:5,00

Protocol: CTCERC202400009048 * CERTIFIED TRUE COPY
* Issued 17-10-2024

SCHOELLER BLECKMANN TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RÉCEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 723566 Page: 3 / 6	Rev:
Created on: Date: 17.12.2020	Modified on: 17.12.2020

CHEMICAL COMPOSITION (%)/COMPOSICIÓN QUÍMICA (%)/CHEMISCHE ZUSAMMENSETZUNG (%)/COMPOSITION CHIMIQUE(%)

*L: Ladle C:Products

*	Heat	Seq	C	Mn	Si	P	S	Ni	Cr	Mo	Cu	W
L	56017	1	0,010	0,66	0,230	0,023	0,0004	6,91	25,70	3,65	0,65	0,680
C	56017	13	0,014	0,63	0,300	0,028	0,0010	6,77	25,92	3,77	0,74	0,750
C	56017	14	0,013	0,63	0,300	0,027	0,0010	6,74	25,98	3,79	0,73	0,750

*	Heat	Seq	Co	N	Pren
L	56017	1	0,060	0,2557	41,8362
C	56017	13	0,060	0,2680	42,6500
C	56017	14	0,060	0,2690	42,7900

HEAT TREATMENT/TRATAMIENTO TÉRMICO/WÄRMEBEHANDLUNG/TRAITEMENT THERMIQUE

HIPERTEMPLADOS A 1120 °C , 10 min , Agua
SOLUTION ANNEALED AT 1120 °C , 10 min , WATER
HYPERTREMPES 1120 °C , 10 min , L' EAU
LOESUNGSGEGLUEHT 1120 °C , 10 min , Wasser

TENSILE TEST/TEST DE TENSIÓN/ESSAI TRACTION/ZUGVERSUCH

Lot No	Sample	T	Rp0.2	Rp1.0	Rm	A2"	A5
		°C	MPa	MPa	MPa	%	%
Min		20	550	640	800	25	
Max		20					
283112	1	20	716	765	928	35	29
	2	20	710	750	916	32	26

HARDNESS TEST/TEST DE DUREZA/DUREE/HÄRTEPRÜFUNG

Lot No	Sample	HRC (O)	HRC (M)	HRC (I)
Min				
Max		32	32	32
283112	1	24	24	25
	2	24	24	24
	3	23	24	23
	4	25	24	23

METALURGICAL TESTS/ENSAYOS METALÚRGICOS/METALLURGISCHE PRÜFUNGEN/ESSAIS METALLURGIQUES

INTERGRANULAR CORROSION TEST ACC. TO ASTM A262 PRACT."E": SATISFACTORY
ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ASTM A262 PRACT.E: SATISFACTORIO
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND ASTM A262 PRACT.E: IN ORDNUNG
ESSAI DE CORR. INTERGR. SELON ASTM A262 PRACT.E:SATISFAISANT

INTERGRANULAR CORROSION TEST ACC.TO DIN EN ISO 3651-2 MET.B: SATISFACTORY
ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ISO 3651-2 MET.B: SATISFACTORIO

TÜV SÜD

Certified Management System acc. to ISO 9001, ISO 14001 and ISO 45001 by LRQA

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SCHOELLER-BLECKMANN EDELSTAHLROHR GMBH

Riegler

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Description: Nipple L=100mm ASME B36.19M THRD-M NPT x PE SML ASTM A790 UNS S32760 3/4" thk 2,87mm

raccortubi

Heat num. or Pcs. marking: TL6 - Qty:5,00

Protocol: CTCERC202400009048 * CERTIFIED TRUE COPY
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EN 10204:2004 / 3.1

Number: 723566 Page: 4 / 6	Rev:
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BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND ISO 3651-2
MET."B": IN ORDNUNG
ESSAI DE CORR. INTERGR. SELON ASTM ISO 3651-2 MET."B":SATISFAISANT

PITTING CORROSION TEST ACCORDING TO ASTM G48 METHOD A
TEST TEMPERATURE 50°C TEST DURATION: 24 HRS
NO SIGNS OF PITTING ARE PRESENT. WEIGHT LOSS: 0,3888g/m2

CORROSION TEST ACC. TO ASTM A923 METHOD C (AT 50 °C DURING 24 H)
NO SIGNS OF PITTING ARE PRESENT. WEIGHT LOSS: : 3,8880 : MDD

ETCH TEST ACC. TO ASTM A923 METH.A: UNAFFECTED STRUCTURE

NON-DESTRUCTIVE TESTS/ENSAYOS NO DESTRUCTIVOS/ZERSTÖRUNGSFREIE PRÜFUNGEN/ESSAIS NON DESTRUCTIFS
100% ULTRASONIC TEST ACC. TO ASTM A999/A999M/ASTM E213: SATISFACTORY

POSITIVE MATERIAL IDENTIFICATION TEST ON EACH TUBE/PIPE BY
"X-RAY-FLUORESCENCE-ANALYZER": SATISFACTORY
VERIFICACION DEL GRADO DE ACERO EN CADA TUBO MEDIANTE
"ANALIZADOR DE FLUORESCENCIA DE RAYOS X": SATISFACTORIO
VERWECHSLUNGSPRUEFUNG AN JEDEM ROHR MIT
"RÖNTGEN-FLUORESZENZ-ANALYSATOR": IN ORDNUNG
VERIFICATION DE LA NUANCE SUR CHAQUE TUBE PAR
"X-RAY-FLUORESCENCE-ANALYZER": SATISFAISANT

HYDROSTATIC PRESSURE TESTED AT 172 bar, 2500 PSI DURING 5 SEC
ON EACH TUBE/PIPE: SATISFACTORY
ENSAYO HIDROSTÁTICO A 172 bar, 2500 PSI DURANTE 5 SEC
EN CADA TUBO: SATISFACTORIO
WASSERDRUCKPRÜFUNG BEI 172 bar, 2500 PSI HALTEZEIT 5 SEC
JE ROHR: IN ORDNUNG
ESSAI DE PRESSION HYDROSTATIQUE À 172 bar, 2500 PSI PENDANT 5 SEC
SUR CHAQUE TUBE: SATISFAISANT

TECHNOLOGICAL TESTS/ENSAYOS TECNOLÓGICOS/TECHNOLOGISCHE PRÜFUNGEN/TECHNOLOGICAL TESTS
FLARING TEST: SATISFACTORY
ABOCARDADO S.NORMA: SATISFACTORIO
AUFWEITVERSUCH: IN ORDNUNG
ESSAI D'EVASEMENT: SATISFAISANT

FLATTENING TEST: SATISFACTORY
APLASTADO S.NORMA: SATISFACTORIO
RINGFALTVERSUCH: IN ORDNUNG
ESSAI D'APLATISSEMENT: SATISFAISANT

TÜV SÜD

Certified Management System acc. to ISO 9001, ISO 14001 and ISO 45001 by LRQA

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order#s requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

SCHOELLER-BLECKMANN EDELSTAHLROHR GMBH

Riegler

FR. N. RIEGLER
(WORKS INSPECTOR)

TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate. TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 25 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: Nipple L=100mm ASME B36.19M THRD-M NPT x PE SML ASTM A790 UNS S32760 3/4" thk 2,87mm

raccortubi Heat num. or Pcs. marking: TL6 - Qty:5,00

Protocol: CTCERC202400009048 * CERTIFIED TRUE COPY
* Issued 17-10-2024

SCHOELLER BLECKMANN
TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RÉCEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 723566 Page: 5 / 6	Rev:
Created on: Date: 17.12.2020	Modified on: 17.12.2020

THE TUBES/PIPES CONFORM ALSO TO
ANSI/NACE MR0103/ISO 17495:2015
ANSI/NACE MR0175/ISO15156-3:2015

BESICHTIGUNG UND NACHMESSUNG: IN ORDNUNG
INSPECTION AND CHECKING OF DIMENSIONS: SATISFACTORY
INSPECTION ET CONTROL DES DIMENSIONS: SATISFAISANT

GEFÜGEKONTROLLE: SIEHE ANLIEGENDEN REPORT
FOR MICROGRAPHIC EXAMINATION SEE ENCLOSED REPORT

QUALIFIED ACCORDING TO NORSOK M650 / QTR 005 / QTR 006 FOR
COLD PILGERED/COLD DRAWN PRODUCTS

DIE WERKSTOFFWERTE ENSPRECHEN PUNKT 7.5 DER DRUCKGERÄTERICHTLINIE 2014/68/EU, ANHANG 1, MIT EINER BRUCHDEHNUNG VON MINDESTENS 14 % IM ZUGVERSUCH UND EINER KERBSCHLAGARBEIT VON MINDESTENS 27 J AN EINER ISO-V-KERBSCHLAGPROBE BEI 20° C.

MATERIAL CHARACTERISTICS COMPLY WITH POINT 7.5 OF ANNEX I TO PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU BY HAVING AN ELONGATION AFTER RUPTURE AT TENSILE TEST NO LESS THAN 14 % AND A BENDING RUPTURE ENERGY AT IMPACT TEST NO LESS THAN 27 J AT 20°C.

MARKING/ETIQUETADO/KENNZEICHNUNG/MARKSTEXT

SCHOELLER BLECKMANN / TUBACEX GROUP - SBS 26,67 X 2,87 MM / 3/4 " SCH 40S ASME SA790 ASTM A790 EN 10216-5 TC2 EN 10297-2 1.4501 S32760 CFD CDSMLS HEAT/ PMI-AV LOT NO/ MADE IN AUSTRIA T/A ZFP

REMARKS/OBSERVACIONES/ANMERKUNG/REMARQUES

MECHANICAL TESTS WERE PERFORMED IN LONGITUDINAL DIRECTION IF NOT OTHERWISE STATED.

REALIZADOS TEST MECÁNICOS EN DIRECCIÓN LONGITUDINAL SI NO HAY OTRAS INSTRUCCIONES.

DIE MECHANISCHEN PRÜFUNGEN WURDEN, SOWEIT NICHT ANDERS ANGEGEBEN, IN LÄNGSRICHTUNG DURCHGEFÜHRT.

LES ESSAIS MÉCHANIQUES ONT ÉTÉ FAITS, SI PAS SPÉCIFIÉ, EN DIRECTION LONGITUDINALE.

NO WELD REPAIR HAS BEEN PERFORMED ON THE MATERIAL.

SIN REPARACION POR SOLDADURA

TÜV SÜD

Certified Management System acc. to ISO 9001, ISO 14001 and ISO 45001 by LRQA

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SCHOELLER-BLECKMANN EDELSTAHLROHR GMBH

Riegler

FR. N. RIEGLER

(WORKS INSPECTOR)

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 25 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: Nipple L=100mm ASME B36.19M THRD-M NPT x PE SML ASTM A790 UNS S32760 3/4" thk 2,87mm

raccortubi Heat num. or Pcs. marking: TL6 - Qty:5,00

Protocol: CTCERC202400009048 * CERTIFIED TRUE COPY
* Issued 17-10-2024

SCHOELLER BLECKMANN TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RECEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 723566 Page: 6 / 6	Rev:
Created on: Date: 17.12.2020	Modified on: 17.12.2020

REMARKS/OBSERVACIONES/ANMERKUNG/REMARQUES

AM MATERIAL WURDE NICHT GESCHWEISST.

SANS RÉPARATION AVEC SOUDURE

MATERIAL MANUFACTURER APPROVED WITH CERTIFICATE NR. 245/2004/MUC BY TÜV SÜDDEUTSCHLAND (NOTIFIED BODY 0036)TO ISSUE CERTIFICATES OF SPECIFIC PRODUCT CONTROL IN ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU.

FABRICANTE DE MATERIALES APROBADO CON CERTIFICADO Nº 245/2004/MUC EMITIDOPOR TUV SUDDEUTSCHLAND (ORGANISMO NOTIFICADO 0036) PARA LA EMISION DE CERTIFICADOS ESPECIFICOS DE CONTROL DE PRODUCTO DE ACUERDO DE LA DIRECTIVA DE EQUIPOS A PRESION 2014/68/EU.

WERKSTOFFHERSTELLER MIT BERECHTIGUNG ZUR AUSSTELLUNG VON BESCHEINIGUNGEN ÜBER SPEZIFISCHE PRÜFUNGEN AN DEN WERKSTOFFEN IM GELTUNGSBEREICH DER ZERTIFIZIERUNG UND IN ÜBEREINSTINSTIMMUNG MIT DER DRUCKGERÄTERICHTLINIE 2014/68/EU UND DEN ZUGRUNDE LIEGENDEN SPEZIFIKATIONEN ENTSPR. ZERTIFIKAT NR. 245/2004/MUC DER BENANNTEN STELLE NR.0036, TÜV SÜDDEUTSCHLAND

PRODUCTEUR DU MATERIEL APPROUVE SOUS CERTIFICATION Nº 245/2004/MUC PAR TUV SUDDEUTSCHLAND (N.B. 0036) POUR EMISSION DES CERTIFICATS SPECIFIQUE DE CONTROLE DE PRODUIT SELON LA DIRECTIVE DES EQUIPES A PRESION 2014/68/EU.

MATERIAL IS FREE OF RADIOACTIVE CONTAMINATION
EL MATERIAL ESTA LIBRE DE CONTAMINACION POR RADIACIONES
MATERIAL IST FREI VON RADIOAKTIVITÄT
MATÉRIEL LIBRE DE POLUTION RADIOACTIVE

TÜV SÜD

Certified Management System acc. to ISO 9001, ISO 14001 and ISO 45001 by LRQA

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SCHOELLER-BLECKMANN EDELSTAHLROHR GMBH

Riegler

FR. N. RIEGLER

(WORKS INSPECTOR)

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 25 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: Nipple L=100mm ASME B36.19M THRD-M NPT x PE SML ASTM A790 UNS S32760 3/4" thk 2,87mm

raccortubi Heat num. or Pcs. marking: TL6 - Qty:5,00

Protocol: CTCERC202400009048 * CERTIFIED TRUE COPY
* Issued 17-10-2024

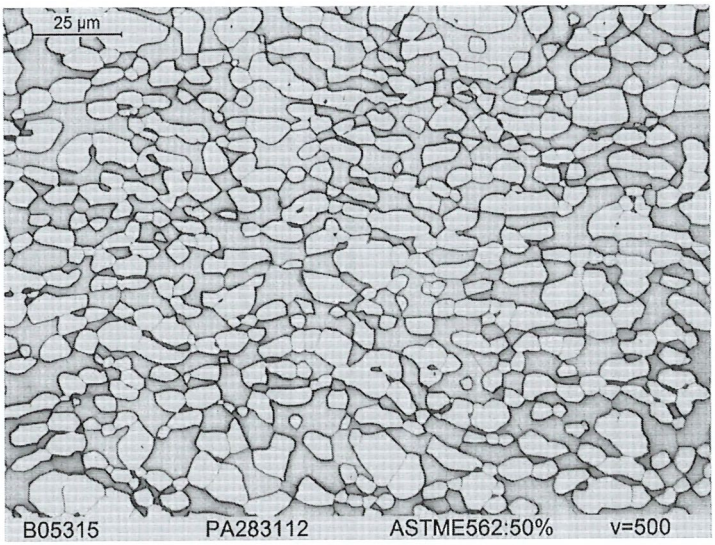
SCHOELLER BLECKMANN EDELSTAHLROHR / TUBACEX GROUP	Anlage zu **ABNAHMEPRÜFZEUGNIS** EN 10204 3.1 Annex to **INSPECTION CERTIFICATE** EN 10204 3.1	Zertifikat Nr. Certificate No. **723566**
		Rev.: 00
		Date: 17.12.2020

MICROGRAPHIC EXAMINATION REPORT

WORK ORDER NO.: I008301 / 10

MICROSTRUCTURE: UNIFORM STRUCTURE ACROSS FULL WALLTHICKNESS, FREE FROM CARBIDES, NITRIDES AND INTERMETALLIC PHASES.

FERRITE CONTENT TO ASTM E562: 50%



SCHOELLER-BLECKMANN EDELSTAHLROHR GmbH
Rohrstraße 1
2630 Ternitz, AUSTRIA

TL.: +43 2630 316 601
FAX: +43 2630 316 894
E-MAIL: **qualitysber@sber.co.at**

Zeichen des Prüfers
Symbol of Inspector

Riegler
Nicole Riegler
Der Werkssachverständige
Works Inspector

Customer: ROSETTI MARINO S.p.A.

Order: 1724001267 - 24.06.24 - Item n.: 25 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Description: Nipple L=100mm ASME B36.19M THRD-M NPT x PE SML ASTM A790 UNS S32760 3/4" thk 2,87mm

raccortubi Heat num. or Pcs. marking: TL6 - Qty:5,00

Protocol: CTCERC202400009048 * CERTIFIED TRUE COPY
* Issued 17-10-2024

Attachment

to ISO 9001:2015 certificate of approval No ISO 9001 – 0030001 dated 22 December 2021, expiring on 19 January 2025 issued to:

O.M.S.A. S.r.l.

Via per Caronno Varesino, 21048 Solbiate Arno - VA, Italy

The Quality Management System supports the requirements of Annex I, chapt. 4.3 of

DIRETTIVE 2014/68/EU

Approval Number(s): 0030001 – PED

The application of the requirements of 2014/68/EU Directive, attachment I, chapt 4.3 is referred to the manufacturing of:

Fittings (from 3000lbs to 9000lbs and schedule 40 to schedule XXS)

made in:

Carbon Steel (ASME A105, A106/B, A106/C, A234WPB; ASME A350LF2, A333/6, A420WPL6, A350LF1, A333/1, A350LF3; API5L/B; ST33.32; NACE MR0175/ISO 15156-3; SA/A694 F52; SA A694 F60; SA/A694 F65).

Austenitic Stainless Steel (ASME A182F304, A182F304L, A182F304H; ASME A182F316, A182F316L; ASME A182F321, A182F321H; ASME A182F310; ASME A182F347; ASME A182F44 (UNS-S31254); ASME A312TP304, A312TP304L; ASME A312TP316, A312TP316L; ASME A312TP321; ASME A312TP310; ASME A312TP347; NACE MR0175/ ISO 15156-3);

Low-Alloy Steel (ASME A182F1, ASME A182F5; ASME A182F9; ASME A182F11; ASME A182F22; ASME A182F91; NACE MR0175/ISO 15156-3);

Ferritic Alloy-Steel (ASME A335P1; ASME A335P5; ASME A335P9; ASME A335P11; ASME A335P12; ASME A335P22; ASME A335P91; NACE MR0175/ISO 15156-3);

Ferritic-Austenitic Stainless Steel (Duplex and Superduplex) (ASME A182F51 (UNS-S31803); ASME A182F52 (UNS-S32950); ASME A182F53 (UNS-S32750); ASME A182F55 (UNS-S32760); NACE MR0175/ISO 15156-3);

Martensitic Stainless Steel (ASME A182F6A; NACE MR0175/ISO 15156-3);

Alloy (Alloy20 (UNS-N08020); Alloy400 (UNS-N04400); NACE MR0175/ISO 15156-3).

Paul Graaf

Area Operations Manager, Europe

Issued by: LRQA ITALY S.R.L.

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Issued by: LRQA ITALY S.R.L., Viale Monza, 265 20126 Milano Italy

ITALTEST NDT
CONTROLLI E COLLAUDI INDUSTRIALI
SETTIMO MILANESE – LEGNANO (MI) www.italtest.it

RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI

LIQUID PENETRANT TEST REPORT

50 dal 1965
CERT. ISO 9001 LRC0100763/QMS

N° 4.265 / 2024

PAGINA DI PAGINE
Page 1 of 2 Pages

CLIENTE Customer RACCORTUBI S.p.A.	ORDINE Order 1724001267 – 24.06.24	COMMESSA Job 00002823

OGGETTO
Object SEE PAGE 2

SPECIFICA GENERALE General specification	PIANO DI CONTROLLO Control Plan	FASE Phase	CRITERIO D'ACCETTAZIONE Acceptance Standards
ASTM E 165			ASME VIII DIV.1 APP.8

PROCEDURA Procedure	MATERIALE Material	DISEGNO FIG. Drawing Fig.	% CONTROLLATA Extent %
	SEE PAGE 2		100% SURFACE

CONDIZIONE SUPERFICE Surface Conditions	SALDATO As Welded	MOLATO Ground	LAVORATO Machined	FORGIATO As Forged X	FUSO As Cast

STATO DEL MATERIALE Material Status	PRIMA DEL T.T. Before Heat Treatment	DOPO T.T. After Heat Treatment	DOPO RIPARAZIONE After Repair

DATI DELLA PROVA
Test Data

METODO DI PULIZIA
Precleaning Method SOLVENT AND PAPER

TECNICA Technique	CONTRASTO DI COLORE Color Contrasting X	FLUORESCENTE Fluorescent
	ILLUMINAZIONE White Light Intensity 1200 lx	ILLUMINAZIONE Black Light Intensity

METODO DI ISPEZIONE Liquid Penetrant Inspection Method	MARCA Brand N.D.T.		PENETRANTE Penetrant	SPRAY Spray X	LOTTO Batch 210115Ps	SCADENZA Expiry 02/2025
	TIPO Type	LAVABILE IN ACQUA Water Washable X		PENNELLO Brush	LOTTO Batch	SCADENZA Expiry
		POST EMULSIONABILE Post Emulsifiable	RIVELATORE Developer	SECCO Dry	LOTTO Batch	SCADENZA Expiry
		RIMOVIBILE CON SOLVENTE Solvent Removable		UMIDO Wet X	LOTTO Batch 230206W150s	SCADENZA Expiry 01/2027

TEMPO DI PENETRAZIONE Dwell Time 20 MINUTE	METODO DI PULIZIA Cleaning Method WATER AND PAPER
TEMPO DI SVILUPPO Developing Time 10 MINUTE	METODO DI PULIZIA Cleaning Method WATER AND PAPER

RISULTATI DELLA PROVA
Test Results

SENZA DIFETTI No Defects X	DIFETTI ACCETTABILI Accettable Defects	DIFETTI NON ACCETTABILI Unaccepptable Defects

OSSERVAZIONI O DESCRIZIONE DELLE INDICAZIONI
Description Of Defects, Size And Location

RISULTATI Results	CONFORME ALLA SPECIFICA According To Specification X	NON CONFORME ALLA SPECIFICA Not According To Specification	SCARTO Scrap

NOTE
Notes

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT DATA Date 21 / 10 / 2024	DATA Date	DATA Date

ITALTEST NDT CONTROLLI E COLLAUDI INDUSTRIALI SETTIMO MILANESE – LEGNANO (MI) www.italtest.it	RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI LIQUID PENETRANT TEST REPORT	50 dal 1965 CERT. ISO 9001 LRC0100763/QMS	N° 4.265 / 2024 PAGINA DI PAGINE Page 2 of 2 Pages

CLIENTE Customer RACCORTUBI S.p.A.	ORDINE Order 1724001267 – 24.06.24	COMMESSA Job 00002823

ITEM Item	Q.TÀ Q.ty	DESCRIZIONE Description	MATERIALE Material	COLATA Heat
2	5	CAP FORGED THRD-F NPT 3000 FRG ¾"	ASTM A-182 F55 UNS S32760 DIM. ASME B16.11	MA2
25	5	NIPPLE L=100 THRD-M NPT x PE SML ¾" thk. 2.87 mm	ASTM/ASME A/SA-790 UNS S32760 DIM. ASME B16.19M	TL6
-	-	-	-	-

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT DATA Date 21 / 10 / 2024	DATA Date	DATA Date

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724001267	123A90A	Q012400601

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature: Sonia Emiliani

Data / Date: 26/07/2024

Sonia Emiliani

☒ REVIEW

☐ WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 26/07/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00006977
Packing list	PLPLIS202400006940
Ns. Rif.	00002823
Vs. Rif.	1724001267 - 24.06.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00006977

22/07/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00002823

Ordine N. P.O. number: 1724001267 - 24.06.24

123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
1	5	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM/ASME A/SA350 Gr.LF2 3/4''	RW9 CTCERT202400004932_1.0001.TIF
3	40	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L 3/4''	SI9 CTCERT202400004932_1.0001.TIF
26	35	Nipple L=100mm ASME B36.19M THRD-M NPT x PE SML ASTM A312 Gr.TP316/316L 3/4'' thk 2,87mm	SZ8 CTCERT202400004932_1.0001.TIF
41	6	TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS	E61718 CTCERT202400004935_1.0001.TIF

raccortubi

00006977

26/07/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				RACCORDI FORGIATI ASTM A-350 LF2	
1	NR	5	0.00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM/ASME A/SA350 Gr.LF2 3/4"	RW9
				RACCORDI FORGIATI ASTM A-182 F316/316L DIM. ANSI B16.11	
3	NR	40	0.00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L 3/4"	SI9
				NIPPLI DA TUBO ASTM A-312 TP.316/316L	
26	NR	35	0.00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE SML ASTM A312 Gr.TP316/316L 3/4" thk 2,87mm	SZ8
				RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
41	NR	6	0.00	TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS	E61718

raccortubi

00006977

26/07/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
			RACCORDI FORGIATI ASTM A-182 F316/316L DIM. ANSI B16.11	
3	40	NR	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L 3/4"	SI9
			NIPPLI DA TUBO ASTM A-312 TP.316/316L	
26	35	NR	Nipple L=100mm ASME B36.19M THRD-M NPT x PE SML ASTM A312 Gr.TP316/316L 3/4" thk 2,87mm	SZ8
			RACCORDI ASME/ASTM SA/A-403 WP.316/316L, DIM/SMUSSI ANSI B16.9, B16.25	
41	6	NR	TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS	E61718

ITALTEST NDT CONTROLLI E COLLAUDI INDUSTRIALI SETTIMO MILANESE – LEGNANO (MI) www.italtest.it	RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI LIQUID PENETRANT TEST REPORT	50 dal 1965 CERT. ISO 9001 LRC0100763/QMS	N° 4.198 / 2024 PAGINA DI PAGINE Page 1 of 2 Pages

CLIENTE Customer RACCORTUBI S.p.A.	ORDINE Order 1724001267 - 24.06.24	COMMESSA Job 00002823

OGGETTO
Object SEE PAGE 2

SPECIFICA GENERALE General specification	PIANO DI CONTROLLO Control Plan	FASE Phase	CRITERIO D'ACCETTAZIONE Acceptance Standards
ASME V ART.6			ASME VIII DIV.1 App.8

PROCEDURA Procedure	MATERIALE Material	DISEGNO FIG. Drawing Fig.	% CONTROLLATA Extent %
	SEE PAGE 2		100%

CONDIZIONE SUPERFICE Surface Conditions	SALDATO As Welded	MOLATO Ground	LAVORATO Machined	FORGIATO As Forged X	FUSO As Cast

STATO DEL MATERIALE Material Status	PRIMA DEL T.T. Before Heat Treatment	DOPO T.T. After Heat Treatment	DOPO RIPARAZIONE After Repair

DATI DELLA PROVA
Test Data

METODO DI PULIZIA
Precleaning Method SOLVENT AND PAPER

TECNICA Technique	CONTRASTO DI COLORE Color Contrasting X	FLUORESCENTE Fluorescent
	ILLUMINAZIONE White Light Intensity 1200 lx	ILLUMINAZIONE Black Light Intensity

METODO DI ISPEZIONE Liquid Penetrant Inspection Method						
MARCA Brand N.D.T.			PENETRANTE Penetrant	SPRAY Spray X	LOTTO Batch 210115Ps	SCADENZA Expiry 02/2025
TIPO Type	LAVABILE IN ACQUA Water Washable X			PENNELLO Brush	LOTTO Batch	SCADENZA Expiry
	POST EMULSIONABILE Post Emulsifiable		RIVELATORE Developer	SECCO Dry	LOTTO Batch	SCADENZA Expiry
	RIMOVIBILE CON SOLVENTE Solvent Removable			UMIDO Wet X	LOTTO Batch 230206W150s	SCADENZA Expiry 01/2027

TEMPO DI PENETRAZIONE Dwell Time 20 MINUTE	METODO DI PULIZIA Cleaning Method WATER AND PAPER
TEMPO DI SVILUPPO Developing Time 10 MINUTE	METODO DI PULIZIA Cleaning Method WATER AND PAPER

RISULTATI DELLA PROVA
Test Results

SENZA DIFETTI No Defects X	DIFETTI ACCETTABILI Accettable Defects	DIFETTI NON ACCETTABILI Unaccepptable Defects

OSSERVAZIONI O DESCRIZIONE DELLE INDICAZIONI
Description Of Defects, Size And Location

RISULTATI Results	CONFORME ALLA SPECIFICA According To Specification X	NON CONFORME ALLA SPECIFICA Not According To Specification	SCARTO Scrap

NOTE
Notes

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT DATA Date 24 / 07 / 2024	DATA Date	DATA Date

ITALTEST NDT CONTROLLI E COLLAUDI INDUSTRIALI SETTIMO MILANESE – LEGNANO (MI) www.italtest.it	RAPPORTO DI CONTROLLO CON LIQUIDI PENETRANTI LIQUID PENETRANT TEST REPORT	50 dal 1965 CERT. ISO 9001 LRC0100763/QMS	N° 4.198 / 2024 PAGINA DI PAGINE Page 2 of 2 Pages

ITEM Item	Q.TÀ Q.ty	DESCRIZIONE Description	MATERIALE Material	COLATA Heat
41	6	RID. CONC. 1.1/2"x3/4" SCH.40/S SEAMLESS	ASME/ASTM SA/A-403 WP.316/316L ANSI B16.9/B16.25	E61718
-	-	-	-	-
3	40	CAP FORGED THRD-F NPT 3000 3/4"	ASTM A182 GR. F316/F316L ASME B16.11	SI9
-	-	-	-	-
26	35	THRD-M NPT x PE 3/4" SEAMLESS	ASTM A-312 TP. 316/316L ASME B36.19M	SZ8
-	-	-	-	-

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
ZEZI LELIO LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT DATA Date 24 / 07 / 2024	DATA Date	DATA Date

ITALTEST NDT CONTROLLI E COLLAUDI INDUSTRIALI SETTIMO MILANESE – LEGNANO (MI) www.italtest.it	RAPPORTO DI CONTROLLO MAGNETOSCOPICO MAGNETIC PARTICLE TEST REPORT	50 dal 1965 CERT. ISO 9001 LRC0100763/QMS	N° 3.151 / 2024 PAGINA DI PAGINE Page 1 of 1 Pages

CLIENTE Customer RACCORTUBI S.p.A.	ORDINE Order 1724001267 - 24.06.24	COMMESSA Job 00002823

OGGETTO
Object NR. 5 CAPS FORGED THRD-F NPT 3000 3/4"- ASME B16.11 – HEAT RW9 – ITEM 1

SPECIFICA GENERALE General specification	PROCEDURA Procedure	PIANO DI CONTROLLO Control Plan	CRITERIO D'ACCETTAZIONE Acceptance Standards
ASME V ART.7 - 25			ASME VIII DIV.1 APP.6

MATERIALE Material	COLATA Heat	DISEGNO FIG. Drawing Fig.	% CONTROLLATA Extent %
ASTM/ASME A/SA350 GR.LF2			100%

CONDIZIONE SUPERFICE Surface Conditions	SALDATO As Welded	MOLATO Ground	LAVORATO Machined	FORGIATO As Forged X	FUSO As Cast

STATO DEL MATERIALE Material Status	PRIMA DEL T.T. Before Heat Treatment	DOPO T.T. After Heat Treatment	DOPO RIPARAZIONE After Repair

DATI DELLA PROVA
Test Data

METODO DI MAGNETIZZAZIONE
Method Of Mmagnetizazion

PUNTALI Prods		GIOGO Yoke		BANCO Bench			
CORRENTE Current		CORRENTE Current		BOBINA Coil	Magnetization Longitudinal	TESTE Heads	Magnetization Circular
INTENSITÀ Intensity		DISTANZA Spacing		CORRENTE Current	HWDC	CORRENTE Current	HWDC
DISTANZA Spacing		MARCA Brand		INTENSITÀ Intensity	500 A	INTENSITÀ Intensity	600 A
MATERIALE Material		TIPO Type		MATERIALE Material	Cu	MATERIALE Material	Cu

METODO DI ISPEZIONE
Particle Application Method

SECCO Dry		UMIDO Wet		FLUORESCENTE Fluorescent X	
COLORE POLVERE Powder Color		COLORE POLVERE PowderColor		COLORE Color	YELLOW
SEZIONE POLVERE Powder Size		FONDO BIANCO White Bottom		TIPO Type	FW1 – AC
FONDO BIANCO White Bottom		SOSPENSIONE Suspension In		SOSPENSIONE Suspension In	WATER
MARCA Brand		MARCA Brand		MARCA Brand	N.D.T.
ILLUMINAZIONE White Light Intensity		ILLUMINAZIONE White Light Intensity		ILLUMINAZIONE Black Light Intensity	> 1000 µW/cm²

RISULTATI DELLA PROVA
Test Results

SENZA DIFETTI No Defects X	DIFETTI ACCETTABILI Accettable Defects	DIFETTI NON ACCETTABILI Unaccepptable Defects

OSSERVAZIONI O DESCRIZIONE DELLE INDICAZIONI
Description Of Defects, Size And Location

RISULTATI Results	CONFORME ALLA SPECIFICA According To Specification X	NON CONFORME ALLA SPECIFICA Not According To Specification	SCARTO Scrap

NOTE
Notes

PROVA EFFETTUATA PRESSO
Test Carried Out At WORKSHOP OF ITALTEST N.D.T. S.r.l. LEGNANO (MI)

L'OPERATORE Technician	RAPPRESENTANTE DEL CLIENTE Client Rapresentative	RAPPRESENTANTE ENTE DI COLLAUDO 3rd Party Inspector
LELIO ZEZI LELIO ZEZI Level 2 SNT TC 1A RT/MT/PT UNI EN ISO 9712 RT DATA Date 24 / 07 / 2024	DATA Date	DATA Date

raccortubi Heat num. or Pcs. marking: RW9 - Qty:5,00
Customer: ROSETTI MARINO S.p.A.
Description: Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM/ASME A/SA350 Gr.LF2 3/4"
Order: 1724001267 - 24.06.24 - Item n.: 1 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002823
Protocol: CTCERC2024000006977 * CERTIFIED TRUE COPY
* Issued 22-07-2024

CERTIFICATO DI COLLAUDO / TEST CERTIFICATE IN ACC. TO EN 10204 3.1 - 2004

Cliente/Customer: RACCORTUBI SPA
Ordine cliente/Customer order n°: 00006095 del 25-06-2024
DDT/Delivery note/Packing list: 2024/DDT/002978

Certificate N°: 002978
Omsa Job: 2024/ODV/010393
Data/Date: 18/07/2024

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
001	5	TAPPO FEMMINA 3000 3/4" NPT LF2 CL1	ASTM/ASME SA/A350LF2 CL1	RW9	23/79198	RIVA SPA	12551	

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,1800	1,0400	0,2000	0,0120	0,0080	0,0700	0,1400	0,0100	0,0150	0,0280	0,0020	0,1500	0,0010	0,0109	0,0000	0,0000	0,0000	0,0000	0,0060	0,0000	0,4000	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending T.	Flatting T.	Hydraulic T.	1^HBW Hardness	2^HBW Hardness	1^ Impact/cm2	2^ Impact/cm2	3^ Impact/cm2	Impact test temp °C	Heat treatment
632	356	43	56				160	162	59	68	64	-50	NORMALIZED AT 900°C

RACCORDI SECONDO / FITTINGS IN ACC. TO

According with ANSI B16.11 -21 & BS 3799-74, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - ANSI B1.20.1 -13 - UNI EN ISO 148-1-2016, Carbon steel fully killed & fine grained practice

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
003	40	TAPPO FEMMINA 3000 3/4" NPT F316/L	ASTM/ASME S/A182 F316/F316L	SI9	291416	VALBRUNA SPA	MEST120265/23	

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,0150	1,5500	0,5500	0,0290	0,0270	10,1000	16,6100	2,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0590	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending T.	Flatting T.	Hydraulic T.	1^HBW Hardness	2^HBW Hardness	1^ Impact/cm2	2^ Impact/cm2	3^ Impact/cm2	Impact test temp °C	Heat treatment
620	325	54	69				184	180	188	190	185	-196	SOLUTION ANN AT 1040°C

RACCORDI SECONDO / FITTINGS IN ACC. TO

According with ANSI B16.11 -21 & BS 3799-74, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - ANSI B1.20.1 -13 - Intergranular corrosion test acc. with ASTM A-262 PR.E satisfactory, Material pickled

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
006	35	N.TUBO 40 3/4"x4"(100mm) PE/NPT TP316/L	ASTM/ASME S/A312 TP316L	SZ8	563045	ALLEIMA	C-7087/20	Repubblica Ceca

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,0130	1,7100	0,3800	0,0340	0,0080	11,0900	16,6400	2,0200	0,0000	0,0000	0,0000	0,0000	0,0000	0,0730	0,0000	0,0980	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending T.	Flatting T.	Hydraulic T.	1^HBW Hardness	2^HBW Hardness	1^ Impact/cm2	2^ Impact/cm2	3^ Impact/cm2	Impact test temp °C	Heat treatment
618,60	286,20	58,30			999,90	7	175	169					Solution annealed at 1060°

RACCORDI SECONDO / FITTINGS IN ACC. TO

Accoding with BS3799-74, ANSI B36.10-22, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - ANSI B1.20.1 -13 - Intergranular corrosion test acc. with ASTM A-262 PR.E satisfactory, Material pickled

The values of chemical analysis are a true and correct copy of the steel mill test certificate.
The mechanical tests are the correct records of the certificate issued from the company that has executed the last transformation of the material.
We declare that the certified material complies with the above standards and to the client's order requirements.

ANNUAL BOOK OF ASTM STANDARDS - 2024
MATERIAL DUAL CERTIFIED ASTM/ASME SEC. II PART A ED. 2023
MATERIAL MANUFACTURER APPROVED BY LRQA CERT. NR. 003001 PED 2014/68/EU ANNEX I CHAPTER 4.3

ENTE COLLAUDO / TPI INSPECTOR

C. QUALITA' / QUALITY CONTROL
O.M.S.A. SRL
Barbara Orlandi

Barbara Orlandi

raccortubi Heat num. or Pcs. marking: SI9 - Qty:40,00

Customer: ROSETTI MARINO S.p.A.

Description: Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L 3/4"

Order: 1724001267 - 24.06.24 - Item n.: 3 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

Protocol: CTCERC202400006977 * CERTIFIED TRUE COPY * Issued 22-07-2024

CTCERT202400004932.1.0001

omsa

CERTIFICATO DI COLLAUDO / TEST CERTIFICATE IN ACC. TO EN 10204 3.1 - 2004

Cliente/Customer: RACCORTUBI SPA
Ordine cliente/Customer order n°: 00006095 del 25-06-2024
DDT/Delivery note/Packing list: 2024/DDT/002978

Certificate N°: 002978
Omsa Job: 2024/ODV/010393
Data/Date: 18/07/2024

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
001	5	TAPPO FEMMINA 3000 3/4" NPT LF2 CL1	ASTM/ASME SA/A350LF2 CL1	RW9	23/79198	RIVA SPA	12551	

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,1800	1,0400	0,2000	0,0120	0,0080	0,0700	0,1400	0,0100	0,0150	0,0280	0,0020	0,1500	0,0010	0,0109	0,0000	0,0000	0,0000	0,0000	0,0060	0,0000	0,4000	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending T.	Flatting T.	Hydraulic T.	1^HBW Hardness	2^HBW Hardness	1^ Impact/cm2	2^ Impact/cm2	3^ Impact/cm2	Impact test temp °C	Heat treatment
632	356	43	56				160	162	59	68	64	-50	NORMALIZED AT 900°C

RACCORDI SECONDO / FITTINGS IN ACC. TO

According with ANSI B16.11 -21 & BS 3799-74, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - ANSI B1.20.1 -13 - UNI EN ISO 148-1-2016, Carbon steel fully killed & fine grained practice

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
003	40	TAPPO FEMMINA 3000 3/4" NPT F316/L	ASTM/ASME S/A182 F316/F316L	SI9	291416	VALBRUNA SPA	MEST120265/23	

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,0150	1,5500	0,5500	0,0290	0,0270	10,1000	16,6100	2,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0590	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending T.	Flatting T.	Hydraulic T.	1^HBW Hardness	2^HBW Hardness	1^ Impact/cm2	2^ Impact/cm2	3^ Impact/cm2	Impact test temp °C	Heat treatment
620	325	54	69				184	180	188	190	185	-196	SOLUTION ANN AT 1040°C

RACCORDI SECONDO / FITTINGS IN ACC. TO

According with ANSI B16.11 -21 & BS 3799-74, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - ANSI B1.20.1 -13 - Intergranular corrosion test acc. with ASTM A-262 PR.E satisfactory, Material pickled

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
006	35	N.TUBO 40 3/4"x4"(100mm) PE/NPT TP316/L	ASTM/ASME S/A312 TP316L	SZ8	563045	ALLEIMA	C-7087/20	Repubblica Ceca

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,0130	1,7100	0,3800	0,0340	0,0080	11,0900	16,6400	2,0200	0,0000	0,0000	0,0000	0,0000	0,0000	0,0730	0,0000	0,0980	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending T.	Flatting T.	Hydraulic T.	1^HBW Hardness	2^HBW Hardness	1^ Impact/cm2	2^ Impact/cm2	3^ Impact/cm2	Impact test temp °C	Heat treatment
618,60	286,20	58,30			999,90	7	175	169					Solution annealed at 1060°

RACCORDI SECONDO / FITTINGS IN ACC. TO

Accoding with BS3799-74, ANSI B36.10-22, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - ANSI B1.20.1 -13 - Intergranular corrosion test acc. with ASTM A-262 PR.E satisfactory, Material pickled

The values of chemical analysis are a true and correct copy of the steel mill test certificate.
The mechanical tests are the correct records of the certificate issued from the company that has executed the last transformation of the material.
We declare that the certified material complies with the above standards and to the client's order requirements.

ANNUAL BOOK OF ASTM STANDARDS - 2024
MATERIAL DUAL CERTIFIED ASTM/ASME SEC. II PART A ED. 2023
MATERIAL MANUFACTURER APPROVED BY LRQA CERT. NR. 003001 PED 2014/68/EU ANNEX I CHAPTER 4.3

ENTE COLLAUDO / TPI INSPECTOR

C. QUALITA' / QUALITY CONTROL
O.M.S.A. SRL
Barbara Orlandi

Barbara Orlandi

Customer: ROSETTI MARINO S.p.A.

Description: Nipple L=100mm ASME B36.19M THRD-M NPT x PE SML ASTM A312 Gr.TP316/316L 3/4" thk 2,87mm

Order: 1724001267 - 24.06.24 - Item n.: 26 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000002823

raccortubi Heat num. or Pcs. marking: SZ8 - Qty:35,00

Protocol: CTCERC2024000006977 * CERTIFIED TRUE COPY * Issued 22-07-2024

CERTIFICATO DI COLLAUDO / TEST CERTIFICATE IN ACC. TO EN 10204 3.1 - 2004

Cliente/Customer: RACCORTUBI SPA
Ordine cliente/Customer order n°: 00006095 del 25-06-2024
DDT/Delivery note/Packing list: 2024/DDT/002978

Certificate N°: 002978
Omsa Job: 2024/ODV/010393
Data/Date: 18/07/2024

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
001	5	TAPPO FEMMINA 3000 3/4" NPT LF2 CL1	ASTM/ASME SA/A350LF2 CL1	RW9	23/79198	RIVA SPA	12551	

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,1800	1,0400	0,2000	0,0120	0,0080	0,0700	0,1400	0,0100	0,0150	0,0280	0,0020	0,1500	0,0010	0,0109	0,0000	0,0000	0,0000	0,0000	0,0060	0,0000	0,4000	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending T.	Flatting T.	Hydraulic T.	1^HBW Hardness	2^HBW Hardness	1^ Impact/cm2	2^ Impact/cm2	3^ Impact/cm2	Impact test temp °C	Heat treatment
632	356	43	56				160	162	59	68	64	-50	NORMALIZED AT 900°C

RACCORDI SECONDO / FITTINGS IN ACC. TO

According with ANSI B16.11 -21 & BS 3799-74, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - ANSI B1.20.1 -13 - UNI EN ISO 148-1-2016, Carbon steel fully killed & fine grained practice

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
003	40	TAPPO FEMMINA 3000 3/4" NPT F316/L	ASTM/ASME S/A182 F316/F316L	SI9	291416	VALBRUNA SPA	MEST120265/23	

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,0150	1,5500	0,5500	0,0290	0,0270	10,1000	16,6100	2,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0590	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending T.	Flatting T.	Hydraulic T.	1^HBW Hardness	2^HBW Hardness	1^ Impact/cm2	2^ Impact/cm2	3^ Impact/cm2	Impact test temp °C	Heat treatment
620	325	54	69				184	180	188	190	185	-196	SOLUTION ANN AT 1040°C

RACCORDI SECONDO / FITTINGS IN ACC. TO

According with ANSI B16.11 -21 & BS 3799-74, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - ANSI B1.20.1 -13 - Intergranular corrosion test acc. with ASTM A-262 PR.E satisfactory, Material pickled

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
006	35	N.TUBO 40 3/4"x4"(100mm) PE/NPT TP316/L	ASTM/ASME S/A312 TP316L	SZ8	563045	ALLEIMA	C-7087/20	Repubblica Ceca

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,0130	1,7100	0,3800	0,0340	0,0080	11,0900	16,6400	2,0200	0,0000	0,0000	0,0000	0,0000	0,0000	0,0730	0,0000	0,0980	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending T.	Flatting T.	Hydraulic T.	1^HBW Hardness	2^HBW Hardness	1^ Impact/cm2	2^ Impact/cm2	3^ Impact/cm2	Impact test temp °C	Heat treatment
618,60	286,20	58,30			999,90	7	175	169					Solution annealed at 1060°

RACCORDI SECONDO / FITTINGS IN ACC. TO

Accoding with BS3799-74, ANSI B36.10-22, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - ANSI B1.20.1 -13 - Intergranular corrosion test acc. with ASTM A-262 PR.E satisfactory, Material pickled

The values of chemical analysis are a true and correct copy of the steel mill test certificate.
The mechanical tests are the correct records of the certificate issued from the company that has executed the last transformation of the material.
We declare that the certified material complies with the above standards and to the client's order requirements.

ANNUAL BOOK OF ASTM STANDARDS - 2024
MATERIAL DUAL CERTIFIED ASTM/ASME SEC. II PART A ED. 2023
MATERIAL MANUFACTURER APPROVED BY LRQA CERT. NR. 003001 PED 2014/68/EU ANNEX I CHAPTER 4.3

ENTE COLLAUDO / TPI INSPECTOR

C. QUALITA' / QUALITY CONTROL
O.M.S.A. SRL
Barbara Orlandi

Barbara Orlandi

raccortubi Heat num. or Pcs. marking: E61718 - Qty:6,00

Customer: ROSETTI MARINO S.p.A.

Description: TEE RID. 1.1/2"x3/4" SCH.40/S SEAMLESS

Order: 1724001267 - 24.06.24 - Item n.: 41 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400002823

MILL TEST CERTIFICATE

ZHEJIANG JNDIA PIPELINE INDUSTRY CO., LTD.
No.366,Avenue 6,Binhai, Jinhai Industrial Park, Economy& Technology Developing Zone, Wenzhou, 325025, Zhejiang Province, China.
Tel: +86-577-85826161 Fax: +86-577-85826565
Email: Sales@jndia.com.cn

According to
EN 10204 3.1

MTC NO.	JNDIA2023-GW517-08
Date of issue	21/Jul/23
Material Specification	ASTM A403-22
Material	WP316/316L
Dimensional Specification	ASME B16.9-2018
Melting Process	Electric Furnace

Order No.:803
ISO 9001:2015: 50095-2009-AQ-RGC-RvA
PED 2014/68/EU Cer: 07/202/9030/WZ/2456/20
AD 2000-Merkblatt W0 Cert. No.: 07/202/9030/WP/2456/20

Chemical Analysis

Item No.	Item Description	Heat No.	Qty(PCS)	%C	%Si	%Mn	%P	%S	%Cr	%Ni	%Cu	%N	%Mo	
				≤0.030	≤1.00	≤2.00	≤0.045	≤0.030	16.0-18.0	10.0-14.0			2.0-3.0	
55	TEE RID 11/2"X3/4" SCH.10S	E61718	10	0.021	0.47	1.08	0.031	0.002	16.57	10.26			2.07	
56	TEE RID 11/2"X3/4" SCH.40S	E61718	20	0.021	0.47	1.08	0.031	0.002	16.57	10.26			2.07	
13	CURVE 90 SR 8" SCH.40S	E61770	25	0.019	0.55	0.75	0.031	0.001	16.56	10.15			2.11	
19	RID CONC 6"X21/2" SCH.40	E61770	10	0.019	0.55	0.75	0.031	0.001	16.56	10.15			2.11	
24	RID ECC 6"X3" SCH.40S	E61770	20	0.019	0.55	0.75	0.031	0.001	16.56	10.15			2.11	
25	RID ECC 8"X6" SCH.40S	E61770	10	0.019	0.55	0.75	0.031	0.001	16.56	10.15			2.11	
			95											

Mechanical Properties

Item No.	Item Description	Sample Specification	Lab Temperature	Tensile MPa	Yield (MPa) Rp 0.2	Elong %	Red.Area %	Hardness HRC	Corrosion Test ASTM A262 Practice E	PMI Test	RT Test	HT Test	Visual & Dimension
		12.5*50	20℃	≥515	≥205	≥28	-	≤22	-	-	-	-	-
55	TEE RID 11/2"X3/4" SCH.10S	-	-	620	301	54	-	<20/<20/<20	ACC	ACC	-	-	ACC
56	TEE RID 11/2"X3/4" SCH.40S	-	-	620	301	54	-	<20/<20/<20	ACC	ACC	-	-	ACC
13	CURVE 90 SR 8" SCH.40S	-	-	610	306	52	-	<20/<20/<20	ACC	ACC	-	-	ACC
19	RID CONC 6"X21/2" SCH.40	-	-	610	306	52	-	<20/<20/<20	ACC	ACC	-	-	ACC
24	RID ECC 6"X3" SCH.40S	-	-	610	306	52	-	<20/<20/<20	ACC	ACC	-	-	ACC
25	RID ECC 8"X6" SCH.40S	-	-	610	306	52	-	<20/<20/<20	ACC	ACC	-	-	ACC

HEAT TREATMENT: SOLUTION TREATED AT 1050℃, WATER QUENCHED
WE CERTIFY THIS MATERIAL HAS BEEN MANUFACTURED AND EXAMINED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE SPECIFICATION(S) AND THE RESULTS OF ALL EXAMINATIONS ARE ACCEPTABLE
NACE MR0175/ISO 15156-1 2020.IGC-262 E.

CHIEF INSPECTOR:

Protocol: CTCERC202400006977 * CERTIFIED TRUE COPY
* Issued 22-07-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724001267	123A90A	Q012400900

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

21.10.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 02/10/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00008811
Packing list	PLPLIS202400008761
Ns. Rif.	00002823
Vs. Rif.	1724001267 - 24.06.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00008811

02/10/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00002823

Ordine N. P.O. number: 1724001267 - 24.06.24

123A90A - Base Load Power Hub Platform

Pos. *Item*	**Q.ta'** *Q.ty*	**Descrizione** *Description*	**N° Colata o Marcatura Pz. Immagine** *Heat N° or PCS. Marking Image*
24	5	Nipple L=100mm ASME B36.10M THRD-M NPT x PE SML ASTM/ASME A/SA333 Gr.6 3/4" thk 3,91mm	SU1 CTCERT202400006148_1.0001.TIF

raccortubi

00008811

02/10/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00002823
Ordine N. P.O. number: 1724001267 - 24.06.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 02/10/2024

Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
24	NR	5	0.00	Nipple L=100mm ASME B36.10M THRD-M NPT x PE SML ASTM/ASME A/SA333 Gr.6 3/4" thk 3,91mm	SU1

Attachment

to ISO 9001:2015 certificate of approval No ISO 9001 – 0030001 dated 22 December 2021, expiring on 19 January 2025 issued to:

O.M.S.A. S.r.l.

Via per Caronno Varesino, 21048 Solbiate Arno - VA, Italy

The Quality Management System supports the requirements of Annex I, chapt. 4.3 of

DIRETTIVE 2014/68/EU

Approval Number(s): 0030001 – PED

The application of the requirements of 2014/68/EU Directive, attachment I, chapt 4.3 is referred to the manufacturing of:

Fittings (from 3000lbs to 9000lbs and schedule 40 to schedule XXS)

made in:

Carbon Steel (ASME A105, A106/B, A106/C, A234WPB; ASME A350LF2, A333/6, A420WPL6, A350LF1, A333/1, A350LF3; API5L/B; ST33.32; NACE MR0175/ISO 15156-3; SA/A694 F52; SA A694 F60; SA/A694 F65).

Austenitic Stainless Steel (ASME A182F304, A182F304L, A182F304H; ASME A182F316, A182F316L; ASME A182F321, A182F321H; ASME A182F310; ASME A182F347; ASME A182F44 (UNS-S31254); ASME A312TP304, A312TP304L; ASME A312TP316, A312TP316L; ASME A312TP321; ASME A312TP310; ASME A312TP347; NACE MR0175/ ISO 15156-3);

Low-Alloy Steel (ASME A182F1, ASME A182F5; ASME A182F9; ASME A182F11; ASME A182F22; ASME A182F91; NACE MR0175/ISO 15156-3);

Ferritic Alloy-Steel (ASME A335P1; ASME A335P5; ASME A335P9; ASME A335P11; ASME A335P12; ASME A335P22; ASME A335P91; NACE MR0175/ISO 15156-3);

Ferritic-Austenitic Stainless Steel (Duplex and Superduplex) (ASME A182F51 (UNS-S31803); ASME A182F52 (UNS-S32950); ASME A182F53 (UNS-S32750); ASME A182F55 (UNS-S32760); NACE MR0175/ISO 15156-3);

Martensitic Stainless Steel (ASME A182F6A; NACE MR0175/ISO 15156-3);

Alloy (Alloy20 (UNS-N08020); Alloy400 (UNS-N04400); NACE MR0175/ISO 15156-3).

Paul Graaf

Area Operations Manager, Europe

Issued by: LRQA ITALY S.R.L.

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.
Issued by: LRQA ITALY S.R.L., Viale Monza, 265 20126 Milano Italy

Customer: ROSETTI MARINO S.p.A.

Description: Nipple L=100mm ASME B36.10M THRD-M NPT x PE SML ASTM/ASME A/SA333 Gr.6 3/4" thk 3,91mm

Order: 1724001267 - 24.06.24 - Item n.: 24 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000282

raccortubi Heat num. or Pcs. marking: SU1 - Qty:5,00

Protocol: CTCERC20240000811 * CERTIFIED TRUE COPY * Issued 02-10-2024

CERTIFICATO DI COLLAUDO / TEST CERTIFICATE IN ACC. TO EN 10204 3.1 - 2004

Cliente/Customer: RACCORTUBI SPA
Ordine cliente/Customer order n°: 00006095 del 25-06-2024
DDT/Delivery note/Packing list: 2024/DDT/003595

Certificate N°: 003595
Omsa Job: 2024/ODV/010393
Data/Date: 12/09/2024

Item	Quantity	Descrizione	Material	Heat code	Heat n.	Steel mill	Mill cert	Country of origin
004	5	N.TUBO XS 3/4"x4"(100mm) PE/NPT A333/6	SA-A333 GR.6	SU1	24636	ZELEZIARNE PODBREZOVA	53275/1/2022	Slovacchia

ANALISI CHIMICA DI ACCIAIERIA / STEEL MILL CHEMICAL ANALYSIS

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	N%	Zr%	Co%	Pb%	Fe%	Sn%	W%	C.E%	Pre%
0,0200	1,2100	0,2300	0,0180	0,0070	0,0700	0,0700	0,0200	0,0010	0,0260	0,0040	0,1600	0,0010	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,4200	0,0000

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

R Tens. strengh N/mmq	S Yeld point N/mmq	A Elongation %	C Reduction od Area %	Bending T.	Flatting T.	Hydraulic T.	1^HBW Hardness	2^HBW Hardness	1^ Impact/cm2	2^ Impact/cm2	3^ Impact/cm2	Impact test temp °C	Heat treatment
596	443	29,20			999,90	20,50	169	172	104	108	96	-56	Normalized at 900°C - Cooled in still air

RACCORDI SECONDO / FITTINGS IN ACC. TO

Accoding with BS3799-74, ANSI B36.10-22, Marking in acc. with MSS SP25-18, NACE MR0175/ISO15156-18, NACE MR0103-18 - ANSI B1.20.1 -13 - UNI EN ISO 148-1-2016, Carbon steel fully killed & fine grained practice

The values of chemical analysis are a true and correct copy of the steel mill test certificate.
The mechanical tests are the correct records of the certificate issued from the company that has executed the last transformation of the material.
We declare that the certified material complies with the above standards and to the client's order requirements.

ANNUAL BOOK OF ASTM STANDARDS - 2024
MATERIAL DUAL CERTIFIED ASTM/ASME SEC. II PART A ED. 2023
MATERIAL MANUFACTURER APPROVED BY LRQA CERT. NR. 003001 PED 2014/68/EU ANNEX I CHAPTER 4.3

ENTE COLLAUDO / TPI INSPECTOR

C. QUALITA' / QUALITY CONTROL
O.M.S.A. SRL
Barbara Orlandi

Barbara Orlandi

EITI S.r.l. - Qualytube Division
Via Pietro Palmieri 29, 10138 Torino
Via Enrico Berlinguer 4, 20060 Pozzo d'Adda (MI)

EITI - The Inspection Body.

qualytube

MagneticTest Report

Test Report
Rapporto di Prova
Prüfbericht
Rapport d'essai

Report No. - Rapporto N°
Berichten Nr. - Rapport N° : MT24034

Date - Data - Vom - date : 17/10/2024

Customer - Cliente - Besteller - Acheteur 1)
RACCORTUBI

Customer - Cliente - Besteller - Acheteur 2)

Order No. - Ordine N° - Bestell-Nr. - Commande N°
No. 90

Performed Test
100% MAGNETIC TEST ON ACCESSIBLE SURFACE

Material Description- Descrizione del Materiale
Gegenstand - Dèsignation du Produit
see table below

Test	Electromagnetic joke	According to	EN 10246-12 ASTM E709 - ASME V Article 7
Particles type	fluorescent	According to	ASTM SA960 SUPPLEMENTARY S53
Joke	AC - Magnafulx	Particles Description	MG ICRI G182 batch. No. 2023 04 H2
Calibration block	ASME 4,5 Kg	Inspection conditions	BLACK UV LIGHT - 1000 µW/cm2 min.
		Pie gauge	ASME

Result - Esito
Ergebnis - Résultat
SATISFACTORY
NO REPORTABLE INDICATIONS HAVE BEEN FOUND

ITEM	DIAMETER (NPS) THICKNESS (mm)	STANDARD / GRADE	HEAT	No.		NOTE
24	3/4" x 3,91mm	ASTM/ASME A/SA 333 GR.6	24636	5		NIPPLE L=100mm
27	4"x1.1/2" 6,02mm/5,08mm	ASTM/ASME A/SA350 LF2	T24617	1		NIPOFLANGE REINFORCED

issued by

Qualytube
Nicolò Tuzzi - NDT Specialist
ISO 9712 UT/PT/MT/RT
ISO 9712 CICPND 27050/PND/C Level 2 PT
ISO 9712 CICPND 28229/PND/C Level 2 MT

Verified by

EITI - European Institute of Technical Inspections
Dario Pasqualini
Technical Director
ISO 9712 Level 3 - UT/PT/MT/RT

Customer

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724001828	123A90A	Q012400972

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **15.11.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 15/11/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00010482
Packing list	PLPLIS202400010407
Ns. Rif.	00003948
Vs. Rif.	1724001828 - 12.09.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards

raccortubi

Certificate

Quality management system for Manufacturer of Materials acc. to Directive 2014/68/EU

Certificate no.: 01 202 I/Q-04 1095

Name and address of the certificate holder:

PRESSBOLT S.r.l.
con unico socio
Via Dell'Artigianato, 12
22078 Turate CO
Italy

Herewith we certify that the material manufacturer has established and applies a Quality Management System. The system was audited according to the European Directive 2014/68/EU, Annex I, Par. 4.3, with regard to the materials as listed in the scope of approval.

Test basis: **QM System acc. to EN 764-5, article 4.2 and AD 2000-Merkblatt W0**

Audit report no.: 01 202 I/Q-04 1095

Scope: **Manufacture of stud bolts, valves components, special pieces according to customer's drawings, nuts and bolts for chemical, petrochemical, offshore and energy industries, see annex, 01.07.2022, Rev.: 4, to certificate**

Manufacturing plant: see certificate holder

Validity: **This certificate is valid until 2025-07-27.**

Cologne, 2022-07-18

Dipl.-Ing. (FH) Vera Ruff

TÜV Rheinland 0035 Notified Body

TÜV Rheinland Industrie Service GmbH
Notified Body for Pressure Equipment, ID-No. 0035
Am Grauen Stein, D-51105 Cologne

E-108a

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QuickSand disarmed file "CTCERC202400010482_LA.pdf"
QuickSand disarmed file "CTCERC202400010482_CONF.pdf"

raccortubi

00010482

15/11/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00003948

Ordine N. P.O. number: 1724001828 - 12.09.24

123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
140	4	SB20BO00650200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=85	F2329 CTCERT202400007547_1.0001.TIF CTCERT202400007547_1.0002.TIF
150	20	SB20BO00680300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=100	F2329 CTCERT202400007548_1.0001.TIF CTCERT202400007548_1.0002.TIF
160	30	SB20BO00940200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=75	F2329 CTCERT202400007549_1.0001.TIF CTCERT202400007549_1.0002.TIF
170	10	SB20BO00980200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=80	F2329 CTCERT202400007550_1.0001.TIF CTCERT202400007550_1.0002.TIF
180	20	SB20BO00990300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=110	F2329 CTCERT202400007551_1.0001.TIF CTCERT202400007551_1.0002.TIF
190	80	SB20BO04200300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=105	F2329 CTCERT202400007552_1.0001.TIF CTCERT202400007552_1.0002.TIF
200	10	SB20BO32470300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=120	F2329 CTCERT202400007553_1.0001.TIF CTCERT202400007553_1.0002.TIF
210	30	SB20BO34450200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=105	F2329 CTCERT202400007554_1.0001.TIF CTCERT202400007554_1.0002.TIF
220	20	SB2WBO01960200 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=60	F2329 CTCERT202400007555_1.0001.TIF CTCERT202400007555_1.0002.TIF

raccortubi

00010482

15/11/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 15/11/2024
Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				TIRANTI FILETTATI CON 2 DADI:	
140	NR	4	0.00	SB20BO00650200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-'' L=85	F2329
150	NR	20	0.00	SB20BO00680300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-'' L=100	F2329
160	NR	30	0.00	SB20BO00940200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-'' L=75	F2329
170	NR	10	0.00	SB20BO00980200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-'' L=80	F2329
180	NR	20	0.00	SB20BO00990300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-'' L=110	F2329
190	NR	80	0.00	SB20BO04200300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-'' L=105	F2329

raccortubi

00010482

15/11/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 15/11/2024

Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
200	NR	10	0.00	SB20BO32470300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-'' L=120	F2329
210	NR	30	0.00	SB20BO34450200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-'' L=105	F2329
220	NR	20	0.00	SB2WBO01960200 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-'' L=60	F2329

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email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	1	Item	10
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0085 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
111462	4	P1691110	0001259766

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.42	0.79	0.23	0.01	0.025	1.05	0.17	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1049.7	977.6	22.2	56.5

	Hardness "HB"
Required	max 321
Actual	315;315;315

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 1/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 140 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00650200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=85

raccortubi Heat num. or Pcs. marking: F2329 - Qty:4,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	1	Item	20
Job		Shipping ref.	3415931 of 05 November 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	8	P1679106	0001259767

Chemical Analysis "%"

	C	Mn	Si	P	S	
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05	
Actual	0.45	0.70	0.23	0.012	0.022	

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	291;298;310	230;231;257

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 2/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 140 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00650200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=85

raccortubi Heat num. or Pcs. marking: F2329 - Qty:4,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	2	Item	30
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0100 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	20	P1690060	0001259768

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.77	0.219	0.012	0.0252	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1003	797	23.5	60.3

	Hardness "HB"
Required	max 321
Actual	301;301;301

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 3/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 150 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00680300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=100

raccortubi Heat num. or Pcs. marking: F2329 - Qty:20,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	2	Item	40
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
554325	40	P1680008	0001259769

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.450	0.740	0.220	0.014	0.029

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	278;297;292	246;234;246

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 4/18

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 150 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00680300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=100

raccortubi Heat num. or Pcs. marking: F2329 - Qty:20,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	3	Item	50
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0075 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
111462	30	P1691109	0001259770

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.42	0.79	0.23	0.01	0.025	1.05	0.17	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1049.7	977.6	22.2	56.5

	Hardness "HB"
Required	max 321
Actual	315;315;315

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 5/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 160 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00940200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=75

raccortubi Heat num. or Pcs. marking: F2329 - Qty:30,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY * Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	3	Item	60
Job		Shipping ref.	3415931 of 05 November 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	60	P1679106	0001259771

Chemical Analysis "%"

	C	Mn	Si	P	S	
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05	
Actual	0.45	0.70	0.23	0.012	0.022	

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	291;298;310	230;231;257

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 160 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00940200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=75

raccortubi Heat num. or Pcs. marking: F2329 - Qty:30,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	4	Item	70
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0080 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
111462	10	P1694104	0001259772

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.42	0.79	0.23	0.01	0.025	1.05	0.17	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1049.7	977.6	22.2	56.5

	Hardness "HB"
Required	max 321
Actual	315;315;315

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 7/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00980200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=80

raccortubi Heat num. or Pcs. marking: F2329 - Qty:10,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	4	Item	80
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	20	P1679106	0001259773

Chemical Analysis "%"

	C	Mn	Si	P	S	
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05	
Actual	0.45	0.70	0.23	0.012	0.022	

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	291;298;310	230;231;257

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 8/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00980200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=80

raccortubi

Heat num. or Pcs. marking: F2329 - Qty:10,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY * Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	5	Item	90
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0110 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	20	P1686091	0001259774

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.77	0.219	0.012	0.0252	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1003	797	23.5	60.3

	Hardness "HB"
Required	max 321
Actual	301;301;301

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 180 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00990300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=110

raccortubi Heat num. or Pcs. marking: F2329 - Qty:20,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

Pressbolt s.r.l. con unico socio
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Tel. +39 02 96.97.98.50 - Fax +39 02 96.97.98.29
email qualita@pressbolt.com

Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	5	Item	100
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
554325	40	P1680008	0001259775

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.450	0.740	0.220	0.014	0.029

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	278;297;292	246;234;246

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.p.A.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 10/18

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 180 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00990300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=110

raccortubi Heat num. or Pcs. marking: F2329 - Qty:20,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	6	Item	110
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0105 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	80	P1694107	0001259776

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.770	0.219	0.012	0.025	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1001	796	23.6	60.3

	Hardness "HB"
Required	max 321
Actual	301;300;299

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 11/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 190 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO04200300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8" L=105

raccortubi Heat num. or Pcs. marking: F2329 - Qty:80,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	6	Item	120
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
554325	160	P1680008	0001259777

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.450	0.740	0.220	0.014	0.029

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	278;297;292	246;234;246

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 12/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 190 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO04200300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=105

raccortubi Heat num. or Pcs. marking: F2329 - Qty:80,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	7	Item	130
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0120 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	10	P1694108	0001259778

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.77	0.219	0.012	0.0252	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1003	797	23.5	60.3

	Hardness "HB"
Required	max 321
Actual	301;301;301

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 200 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO32470300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=120

raccortubi Heat num. or Pcs. marking: F2329 - Qty:10,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	7	Item	140
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
554325	20	P1680008	0001259779

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.450	0.740	0.220	0.014	0.029

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	278;297;292	246;234;246

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 14/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 200 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO32470300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=120

raccortubi Heat num. or Pcs. marking: F2329 - Qty:10,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	8	Item	150
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0105 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
BC6380	30	P1694105	0001259780

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.430	0.760	0.210	0.008	0.024	1.020	0.170	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	982	803	23.3	61.7

	Hardness "HB"
Required	max 321
Actual	299;307;304

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 15/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 210 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO34450200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=105

raccortubi Heat num. or Pcs. marking: F2329 - Qty:30,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

PRESSBOLT

Pressbolt s.r.l. con unico socio
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Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	8	Item	160
Job		Shipping ref.	3415931 of 05 November 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	60	P1679106	0001259781

Chemical Analysis "%"

	C	Mn	Si	P	S	
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05	
Actual	0.45	0.70	0.23	0.012	0.022	

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	291;298;310	230;231;257

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 16/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 210 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO34450200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=105

raccortubi Heat num. or Pcs. marking: F2329 - Qty:30,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	9	Item	170
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0060 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
111462	20	P1686993	0001259782

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.42	0.79	0.23	0.01	0.025	1.05	0.17	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1049.7	977.6	22.2	56.5

	Hardness "HB"
Required	max 321
Actual	315;315;315

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.p.A.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 17/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 220 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB2WBO01960200
Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=60

raccortubi Heat num. or Pcs. marking: F2329 - Qty:20,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	9	Item	180
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	40	P1679106	0001259783

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.45	0.70	0.23	0.012	0.022

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	291;298;310	230;231;257

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 18/18

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 220 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB2WBO01960200
Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=60

raccortubi Heat num. or Pcs. marking: F2329 - Qty:20,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724001828	123A90A	Q012400896

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **24.10.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 09/10/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00008900
Packing list	PLPLIS202400008848
Ns. Rif.	00003948
Vs. Rif.	1724001828 - 12.09.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00008900

09/10/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*	Immagine *Image*
10	1	CAP0CS05071H00 CAPS 1.1/2" XS	16I	CTCERT202400006254_1.0001.TIF CTCERT202400006254_2.0001.TIF
20	2	E45RSD01550200 CURVE 45° LR 2" SCH.10/S SEAMLESS	1080SA023	CT327#2023SA0#1080_001.TIF CT327#2023SA0#1080_2.0001.TIF CT327#2023SA0#1080_3.0001.TIF CT327#2023SA0#1080_4.0001.TIF CT327#2023SA0#1080_5.0001.TIF CT327#2023SA0#1080_6.0001.TIF CT327#2023SA0#1080_6.0002.TIF CT327#2023SA0#1080_7.0001.TIF CT327#2023SA0#1080_8.0001.TIF CT327#2023SA0#1080_9.0001.TIF CT327#2023SA0#1080_55.TIF CT327#2023SA0#1080_56.TIF CT327#2023SA0#1080_57.TIF CT327#2023SA0#1080_58.TIF CT327#2023SA0#1080_59.TIF CT327#2023SA0#1080_60.TIF CT327#2023SA0#1080_61.TIF CT327#2023SA0#1080_62.TIF CT327#2023SA0#1080_63.TIF CT327#2023SA0#1080_64.TIF CT327#2023SA0#1080_65.TIF
30	3	E90RSD01650200 CURVE 90° LR 2" SCH.10/S SEAMLESS	1031SA024	CT327#2024SA0#1031_001.TIF CT327#2024SA0#1031_2.0001.TIF CT327#2024SA0#1031_3.0001.TIF CT327#2024SA0#1031_4.0001.TIF CT327#2024SA0#1031_5.0001.TIF CT327#2024SA0#1031_6.0001.TIF CT327#2024SA0#1031_6.0002.TIF CT327#2024SA0#1031_7.0001.TIF CT327#2024SA0#1031_8.0001.TIF CT327#2024SA0#1031_9.0001.TIF CT327#2024SA0#1031_55.TIF CT327#2024SA0#1031_56.TIF CT327#2024SA0#1031_57.TIF CT327#2024SA0#1031_58.TIF CT327#2024SA0#1031_59.TIF CT327#2024SA0#1031_60.TIF CT327#2024SA0#1031_61.TIF

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09/10/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*	Immagine *Image*
40	1	FLB0SS01961H00 BLIND 1.1/2" S.300 RF	S-25033	CTCERT202200003324_1.TIF CTCERT202200003324_2.TIF
80	1	FLW0SS0765UQ00 W.N. 1.1/4" S.300 RF SCH.10/S	13/555	CTCERT201300164108_1.TIF
120	2	REC0SD08001H01 RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS	1004SA024	CT327#2024SA0#1004_001.TIF CT327#2024SA0#1004_2.0001.TIF CT327#2024SA0#1004_3.0001.TIF CT327#2024SA0#1004_4.0001.TIF CT327#2024SA0#1004_5.0001.TIF CT327#2024SA0#1004_6.0001.TIF CT327#2024SA0#1004_6.0002.TIF CT327#2024SA0#1004_7.0001.TIF CT327#2024SA0#1004_8.0001.TIF CT327#2024SA0#1004_9.0001.TIF CT327#2024SA0#1004_55.TIF CT327#2024SA0#1004_56.TIF CT327#2024SA0#1004_57.TIF CT327#2024SA0#1004_58.TIF CT327#2024SA0#1004_59.TIF CT327#2024SA0#1004_60.TIF CT327#2024SA0#1004_61.TIF CT327#2024SA0#1004_62.TIF
260	1	TEE0CS05251H00 TEE UG. 1.1/2" XS SEAMLESS	0D	CTCERT202400006255_1.0001.TIF CTCERT202400006255_2.0001.TIF

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00008900

09/10/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura *Heat N° or PCS. Marking*	Pz.	Immagine *Image*
270	2	TEE0SD02931H00 TEE UG. 1.1/2" SCH.40/S SEAMLESS	1157SA019		CT327#2019SA0#1157_001.TIF CT327#2019SA0#1157_002.TIF CT327#2019SA0#1157_003.TIF CT327#2019SA0#1157_004.TIF CT327#2019SA0#1157_005.TIF CT327#2019SA0#1157_006.TIF CT327#2019SA0#1157_007.TIF CT327#2019SA0#1157_008.TIF CT327#2019SA0#1157_009.TIF CT327#2019SA0#1157_010.TIF CT327#2019SA0#1157_011.TIF CT327#2019SA0#1157_012.TIF CT327#2019SA0#1157_013.TIF CT327#2019SA0#1157_014.TIF CT327#2019SA0#1157_015.TIF CT327#2019SA0#1157_016.TIF CT327#2019SA0#1157_017.TIF CT327#2019SA0#1157_018.TIF
280	1	TER0CS04991H3Q TEE RID. 1.1/2"x3/4" XS SEAMLESS	14E		CTCERT202400006256_1.0001.TIF CTCERT202400006256_2.0001.TIF
290	3	TER0CS26141H01 TEE RID. 1.1/2"x1" XS SEAMLESS	54		CTCERT202400006257_1.0001.TIF CTCERT202400006257_2.0001.TIF

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00008900

09/10/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 09/10/2024
Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				RACCORDI SEC. ASME/ASTM SA/A 420 GR.WPL6, DIM./SMUSSI ANSI B16.9, B16.25	
10	NR	1	0.00	CAP0CS05071H00 CAPS 1.1/2" XS	16I
				RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
20	NR	2	0.00	E45RSD01550200 CURVE 45° LR 2" SCH.10/S SEAMLESS	1080SA023
30	NR	3	0.00	E90RSD01650200 CURVE 90° LR 2" SCH.10/S SEAMLESS	1031SA024
				FLANGE IN ACCIAIO INOX ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	
40	NR	1	0.00	FLB0SS01961H00 BLIND 1.1/2" S.300 RF	S-25033
80	NR	1	0.00	FLW0SS0765UQ00 W.N. 1.1/4" S.300 RF SCH.10/S	13/555

raccortubi

00008900

09/10/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

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Date: 09/10/2024
Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
120	NR	2	0.00	REC0SD08001H01 RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS	1004SA024
				RACCORDI SEC. ASME/ASTM SA/A 420 GR.WPL6, DIM./SMUSSI ANSI B16.9, B16.25	
260	NR	1	0.00	TEE0CS05251H00 TEE UG. 1.1/2" XS SEAMLESS	0D
				RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
270	NR	2	0.00	TEE0SD02931H00 TEE UG. 1.1/2" SCH.40/S SEAMLESS	1157SA019
				RACCORDI SEC. ASME/ASTM SA/A 420 GR.WPL6, DIM./SMUSSI ANSI B16.9, B16.25	

raccortubi

00008900

09/10/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 09/10/2024

Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
280	NR	1	0.00	TER0CS04991H3Q TEE RID. 1.1/2"x3/4" XS SEAMLESS	14E
290	NR	3	0.00	TER0CS26141H01 TEE RID. 1.1/2"x1" XS SEAMLESS	54

raccortubi

00008900

02/10/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
			RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
20		2 NR	E45RSD01550200 CURVE 45° LR 2" SCH.10/S SEAMLESS	1080SA023
30		3 NR	E90RSD01650200 CURVE 90° LR 2" SCH.10/S SEAMLESS	1031SA024
			FLANGE IN ACCIAIO INOX ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	
40		1 NR	FLB0SS01961H00 BLIND 1.1/2" S.300 RF	S-25033
80		1 NR	FLW0SS0765UQ00 W.N. 1.1/4" S.300 RF SCH.10/S	13/555
			RACCORDI ASTM/ASME SA/A-815 UNS S32760 DIM. ASME B16.9/B16.25	
120		2 NR	REC0SD08001H01 RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS	1004SA024
270		2 NR	TEE0SD02931H00 TEE UG. 1.1/2" SCH.40/S SEAMLESS	1157SA019

raccortubi

N. 00008900
1 di 1
DATA Date 02/10/2024

PRELIEVO PROVE
Test coupons identification

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub F

Norme di collaudo	Inspection codes	N.Pratica Ente Collaudo
Mat.le Mat.l.	FLANGE IN ACCIAIO INOX ASTM A-182 ANSI B16.5 125 - 250 AARH GRADO F316/316L	RINA: LLRR: ABS: ALTRI:

IMBALLO :
MATERIALE DA RENDERSI : SI
DESTINAZIONE MERCE : SIDER TEST STRADA DELLA BARIANELLA 1/B CASTEL SAN GIOVANNI (PC)
NOTE :ESEGUIRE 100% PT TEST IN ACCORDANCE WITH ASME V ON 100% OF ACCESSIBLE SURFACE OF 100% OF THE MATERIAL (OPERATORE II LIVELLO ISO9712 O SNT-TC-1A)

Enti collaudo

Uff. Qualita' Raccortubi
Raccortubi Q.A. Dept

Pos. cl. *Item cl.*	Q.ta' *Q.ty*	Tubi Descrizione *Tubes Description*	N. Prova *Test N.*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*	Pr. non distruttiva	Pr. distruttiva
40	1	0.00 FLB0SS01961H00 BLIND 1.1/2" S.300 RF	1,169	S-25033	1.00	0.00
80	1	0.00 FLW0SS0765UQ00 W.N. 1.1/4" S.300 RF SCH.10/S	1,170	13/555	1.00	0.00

SIDERTEST
mechanical chemical non destructive tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant A: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

PT 470 / 24

LAB N° 0864 L

Tipo di controllo/ Type of control *Esame con Liquidi Penetranti/ Liquid Penetrant Examination*

Luogo del Controllo/ Test Location: Str. Barianella, 1/B C.S.Giovanni (PC)

Cliente/ Customer	Subcliente/ Subcustomer	Commessa/ Job	Ordine/ Order
Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00003948**	**1724001828 - 123A90A**

Doc. Cliente/ Client's doc.	*Doc. Sider Test/ Sider Test doc.*	*Norma Esecuzione/ Execution Standard*	*Accettabilità/ Acceptance Std*
	PO 04-003 PT Rev. 17 - IL 04-003-001 PT Rev. 05	**ASME BPVC.V-2023 Art. 6 and 24**	**ASTM E 165-23 - ASME BPVC.VIII.1-2023 App. 8**

Tecnica d'Esame/ Examination Technique	Light intensity (Lux)	Condizioni Superficiali/ Surface Condition	Area Esame/ Area Tested
Liquidi Penetranti Solubili in Acqua a Contrasto di Colore/ Water Washable Color Contrast Penetrant Examination (IIAe2)	**>= 1076**	**Materiale Finito/ Finished Material**	**100% accessible surfaces**

Pulizia/ Cleaning		*Penetrante/ Penetrant*		*Rimozione Penetrante/ Penetrant Removal*		*Asciugatura/ Drying*		*Rilevatore/ Developer*	
Tipo/ Type	**Solvent NITRO**	Applicazione/ Application	**Brush**	Tipo/ Type	**Water Sponging**	Tipo/ Type	**Clean rags**	Applicazione/ Application	**Spray**
Intervallo/ Interval (min)	5'	Tipo/ Type	**Red K71B2P**	Intervallo/ Interval (min)	5'	Intervallo/ Interval (min)	5'	Tipo/ Type	**White D112A**
		Bagno/ Batch	**230707P**					Bagno/ Batch	**240507W150s**
		Marca/ Trade Mark	**ELITE**					Marca/ Trade Mark	**ELITE**
		Tempo mi. di penetrazione/ Minimum Penetration Time	**10'**					Intervallo di interpretazione/ Final interpretation interval	**7' ÷ 60'**

Posizione/ Item	Qta/ Qty	Descrizione/ Description	Prova Nr./ Test Nr.	Materiale/ Material	Colata/ Heat
40	**1**	**BLIND 1,1/2" S.300 RF**	**1169**	**ASTM A 182 F316/F316L**	**S-25033**
80	**1**	**W.N. 1,1/4" S.300 RF SCH. 10S**	**1170**	**ASTM A 182 F316/F316L**	**13/555**

Assenza di Difetti/ Absence of Defects

Conforme a 'Accettabilità'/ Conforming to 'Acceptance Std

Regola decisionale adottata per l'uso dell'incertezza di misura quando dichiara la conformità a un requisito specificato: per i controlli NDT il laboratorio monitora le sorgenti di incertezza, ma non la calcola. Non si riporta l'incertezza nel rapporto di prova. Il risultato può essere CONFORME o NON CONFORME/ Decision rule adopted for the use of measurement uncertainty when declaring compliance with a specified requirement: for NDT controls the laboratory monitors sources of uncertainty, but does not calculate it. The uncertainty is not reported in the test report. The result can be COMPLIANT or NON-COMPLIANT

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Accettabilità" riguarda solamente le prove presenti in questo rapporto di prova.Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti./ This test report refers only to the examined sample as received from the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client. Compliance with documents in "Acceptance Std" refers only to the tests described on this test report.Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.

Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Operatore CND Liv. II/ Lev. 2 NDE Operator	Data Ingresso Materiale/ Date of Material Arrival	Data esecuzione/ Date of Testing	Data Rapporto di prova/ Test Report Date	Cliente/ Customer	Ispettori/ Inspector	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
SIDER TEST S.r.l. MAURIZIO DEPONI LEVEL II SNT-TC-1A	**04/10/2024**	**04/10/2024**	**07/10/2024**			PAOLO AMANI LEVEL 3 SNT-TC-1A

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

Inspection Certificate
EN 10204-2004 3.1

Document no.	8055-P1	19/09/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00006433	

	Item	Quantity	Heat id.
1	CAP 1.1/2" XS WPL6	1,00	16I-16I2373

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PLATE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Al%	Ti%	Nb%	B%
0,220	1,080	0,240	0,014	0,002	0,010	0,030	0,001	0,001	0,001	0,047	0,0020	0,0130	0,0006

CE_{IIW} 0,41

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	323	465	31

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
5 X 10	0,4	Base Mat.	33	39	39	37

Hardness Test

Base Metal Avg 127 HBW

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature
This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 10 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: CAP0CS05071H00
CAPS 1.1/2" XS

raccortubi Heat num. or Pcs. marking: 16I - Qty:1,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* 7327996 08-10-2024

EITI - The Inspection Body

qualytube

EITI S.r.l. - Qualytube Division
Via Pietro Palmieri 29, 10138 Torino
Via Enrico Berlinguer 4, 20060 Pozzo d'Adda (MI)

MagneticTest Report

Test Report
Rapporto di Prova
Prüfbericht
Rapport d'essai

Report No. - Rapporto N°
Berichten Nr. - Rapport N° : MT24033

Date - Data - Vom - date : 20/09/2024

Customer - Cliente - Besteller - Acheteur 1)
RACCORTUBI

Customer - Cliente - Besteller - Acheteur 2)

Order No. - Ordine N° - Bestell-Nr. - Commande N°
No. 82

Performed Test
100% MAGNETIC TEST ON ACCESSIBLE SURFACE

Material Description- Descrizione del Materiale
Gegenstand - Dèsignation du Produit

see table below

Test	Electromagnetic joke
Particles type	fluorescent
Joke	AC - Magnafulx
Calibration block	ASME 4,5 Kg

According to	EN 10246-12 ASTM E709 - ASME VIII Division 1 App.6/8
According to	ASTM SA960 SUPPLEMENTARY S53
Particles Description	MG ICRI G182 batch. No. 2015 04 H2
Inspection conditions	BLACK UV LIGHT - 1000 µW/cm2 min.
Pie gauge	ASME

Result - Esito
Ergebnis - Résultat
SATISFACTORY
NO REPORTABLE INDICATIONS HAVE BEEN FOUND

ITEM	DIAMETER (NPS) THICKNESS (mm)	STANDARD / GRADE	HEAT	No.		NOTE
1	1.1/2" sch. XS	CAPS ASME/ASTM SA/A 420 WPL6	16I-16I2373	1		
5	4"x1.1/2" STD/XS	RID. ECC. ASME/ASTM SA/A 420 WPL6	513131	1		
2	1.1/2" XS	TEE UG. ASME/ASTM SA/A 420 WPL6	0D-0D1533	1		
3	1.1/2"x3/4" XS	TEE RID. ASME/ASTM SA/A 420 WPL6	14E-14E5482-J5L3682	1		
4	1.1/2"x1" XS	TEE RID. ASME/ASTM SA/A 420 WPL6	54-J9KA054	3		

issued by **Verified by** **Customer**

Qualytube
Nicolò Tuzzi - NDT Specialist
ISO 9712 CICPND 27046/PND/C Level 2 UT
ISO 9712 CICPND 27050/PND/C Level 2 PT
ISO 9712 CICPND 28229/PND/C Level 2 MT

EITI - European Institute of Technical Inspections
Dario pasqualini
Technical Director
ISO 9712 Level 3 - UT/PT/VT/RT

PAG. 1 OF 1

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 10 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: CAP0CS05071H00
CAPS 1.1/2" XS

raccortubi Heat num. or Pcs. marking: 16I - Qty:1,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* 733/998 08-10-2024

Materiale base - Fabbricante: MANNESMANN STAINLESS TUBES Cert. No.: 3-22-09826-rev.01
Raw material - manufacturer/Materiel du depart - fabriquant: SMLS PIPES TO ASTM A-790 UNS S32760
MANNESMANN STAINLESS TUBES Cert. No.: 3-22-09826-rev.01

Test produzione Production test/Coupon de production	**Caratteristiche meccaniche** Mechanical Properties/Caracteristiques Mechaniques							
Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS	**Colata N.** Heat N. Couléè N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement 2"	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
QTR: 01/SDSS/A Rev.5 Specimens location drawing as per relevant QTR	CC6519	222/23	586	774	41	HRC<28	HRC 25	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Couléè N.	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**Mo**	**N**	**Cu**	**W**			**PRE**	**FERRITE**
CC6519	0,017	0,34	0,48	0,021	<0,0003	25,6	7,1	3,7	0,26	0,53	0,55			42.0	50.1

Prove
Tests/Tests

Altri G-48 MET.A
Others
Autres

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità

Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/EU annex I para 4.3
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTOR
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.: 0858
- MATERIAL AND TESTS ACCORDING TO M-630 REV.7 - MDS D53 REV.6
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT W RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Order: 1724001828 - 12.09.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240003948

Protocol: CTCERC20240008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

s. marking: 1080SA023 - Qty:2,00

ESS

Prova di "pitting" in ferro-cloruro/ Ferric chloride pitting test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimensioni/ Dimension Lunghezza/ Length	Larghezza/ Width	S
95579	ASTM G48 – 11 (R2020)e1 Method A	**RTX_D53 Rev.9**	B L FT	Meccanica/ Mechanical	52,95	29,14	

Condizioni superficiali/ Surface condition	Lavorato/ Machined
Temperatura di prova/ Test temperature (°C)	50
Tempo di esposizione (ore)/ Exposure time (hours)	24

Data e ora inizio/ Initial date and time	Data e ora fine/ End date and time
31/07/2023 09:31:02	01/08/2023 09:31:02

Peso iniziale/ Initial weight (g)	28,7911
Peso finale/ Final weight (g)	28,7907
Perdita di peso/ Weigth loss (g)	0,0004
Perdita di massa/ Specimen mass loss	
Limite perdita di massa max/ Limit Specimen mass loss r	

Soluzione/ Solution FeCl3 6% SOLUTION

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X/ NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata/ Examined area cm² 30,86 (LxWx2)/100

Esito/ Conclusion: **Conforme a 'Specifi**

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Data Ingresso Materiale/ Date of Material Arrival	**26/07/2023**	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector
Data Rapporto di prova/ Test Report Date	**03/08/2023**	*Antonielli Stefano*	*Amani Paolo*	
	firmato elettronicamente/electronically signed			

Order: 1724001828 - 12.09.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240003948
Pos. marking: 1080SA023 - Qty:2,00
Protocol: CTCERC20240008900 * CERTIFIED TRUE COPY * Issued 09-10-2024
MLESS

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti/ Determining volume fraction by s

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Ingrandimento/ Enla
95575	ASTM E562 – 19e1	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	20% NaOH	500 X

		Valore Min/ Value Min	Valore Max/ Value Max
Ferrite Vv (% Frazione di volume)/ Vv (% Volume Fraction)	50.1	**40**	**55**
s 3,4 95% C.I. 1,3	%RA 2,52		

Ferrite % Frazione di volume per

1	**48**	2
6	**50**	7
11	**46**	12
16	**46**	17
21	**46**	22
26	**46**	27

Nr. di campi per provino/sezione/spaziatura/angolo/ Nr. of fields for specimens/section/angle: 30 / 3.00 x 20 mm / 1 x 3.0 mm / 45°

Esito/ C

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firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

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Pos. marking: 1080SA023 - Qty:2,00

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ILESS

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Temperatura di prova/ temperature (°C)
95582	ASTM E1086 – 22	RTX_D53 Rev.9	B / UP	20

			Min.	Max.				Min.	Max.		Min.	M
C	0,020	±0,004		0,030	Nb					Fe		
Si	0,38	±0,03		1,00	Ti					Ca		
Mn	0,49	±0,03		1,00	*W	0,56	±0,03	0,50	1,00	Ta		
P	0,025	±0,003		0,030	Pb					Sb		
*S	<0,001			0,010	Sn					H		
*Cr	25,8	±0,2	24,0	26,0	As					Cd		
V					B					Se		
*Mo	3,8	±0,1	3,0	4,0	*N	0,28	±0,01	0,20	0,30	Bi		
*Ni	7,2	±0,4	6,0	8,0	La					Hg		
*Cu	0,56	±0,03	0,50	1,00	Mg							
Ce					Zr							
Al					Zn							
Co					O							

The symbol * before the element or formula indicates a value that is outside the Laboratory's accredited range for that element/formula.The symbol (!) means that the sensitivity of th

Expanded uncertainty above reported is based on standard uncertainty multiplied by a coverage factor k = 2 that corresponds to a coverage probability of about 95% for a normal dist

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant**

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firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: Antonielli Stefano

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: Amani Paolo

Ispettori/ Inspector

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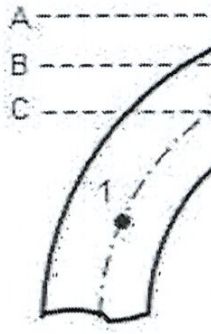
Mrks.: 1080SA023 - Qty:2,00

LESS

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position		Temp./ Temp.
95574	ASTM E 92 – 17 (only Vickers)	RTX_D53 Rev.9	B	T	20 °C

(B1) - Base Material — **MAX 286**

HV10	1	271	2	268	3	266



Position	Average	
(B1) - Base Material	268	HV10

Esito/ Conclusion: **Conforme a 'Specifica'/ Con**

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Data Rapporto di prova/ Test Report Date: **03/08/2023**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Order: 1724001828 - 12.09.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240003948

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Order: 1724001828 - 12.09.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240003948

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
95576	ASTM E3 – 11(R2017) + ASTM E407 – 07 (R2015)e1	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	01/08/2023

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	10% Oxalic	Specimen in Base Material 3.0 x 20.0 = 60.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da nitruri. / Structure free from nitrides.

Esito/ Conclusio

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Data Ingresso Materiale/ Date of Material Arrival	**26/07/2023**			
Data Rapporto di prova/ Test Report Date	**03/08/2023**	*Antonielli Stefano*	*Amani Paolo*	

firmato elettronicamente/electronically signed

Protocol: CTCERC20240008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
95577	ASTM E3 – 11(R2017) + ASTM E407 – 07 (R2015)e1	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	01/08/2023

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	20% NaOH	Specimen in Base Material 3.0 x 20.0 = 60.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion

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Data Rapporto di prova/ Test Report Date	03/08/2023	Antonielli Stefano	Amani Paolo	

firmato elettronicamente/electronically signed

Order: 1724001828 - 12.09.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240003948

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Individuazione di fasi intermetalliche dannose. Attacco con idrossido di sodio/ Detecting Detrimental Intermetallic Phases. A

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
95581	ASTM A923 – 22 Method A	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	01/08/2023

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	40g NaOH to 100g distilled water	Specimen in Base Material



Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure.

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion

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firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

ILESS

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* Issued 09-10-2024

Qty:2,00 - 1080SA023 - marking:

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimen Lunghezza/ Length	Larg
95580	ASTM A923 – 22 Method C	**RTX_D53 Rev.9**	B L FT	Meccanica/ Mechanical	53,17	

Condizioni superficiali/ Surface condition: Lavorato/ Machined

Temperatura di prova/ Test temperature (°C): 50

Temperatura Minima Rilevata/ Minimum temperature observed (°C): 49,49

Temperatura Massima Rilevata/ Maximum temperature observed (°C): 50,68

Tempo di esposizione (ore)/ Exposure time (hours): 24

Data inizio/ Initial date	Data fine/ End date
31/07/2023 11:14:28	01/08/2023 11:14:28

Soluzione/ Solution: FeCl3 6% SOLUTION

Peso iniziale/ Initial weight (g): 28,6728

Peso finale/ Final weight (g): 28,6723

Perdita di peso/ Weigth loss (g): 0,0005

Perdita di massa/ Specimen mass loss: 0.1

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ES
NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED A

Velocità di corrosione/ Corrosion speed

Limite velocità di corrosione (mg/(dm²*d)) max/ Corrosion rate

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant w**

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una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione
This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers on
ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the custom

Data Ingresso Materiale/ Date of Material Arrival: **26/07/2023**

Data Rapporto di prova/ Test Report Date: **03/08/2023**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Order: 1724001828 - 12.09.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY * Issued 09-10-2024

MLESS

Pcs. marking: 1080SA023 - Qty:2,00

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Dimensioni/ Dimension Wth	Ø / Width	ØPipe	Lo (mm)	Posizione di prelievo/ Test position			Temp./ Temp.	Snervamento/ Yield strength				Rottura/ T strength	
			mm							℃	MPa			MPa		MPa
95572	ASTM A370 – 22 §6÷14, § A1.3, § A2.2 and § A3.2	**RTX_D53 Rev.9**	3,10	12,46		50,00	B	L	FT	23,0	(≥550)	Rp0,2%	**586**		(≥750)	

Esito/ Conclusion: Con

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Sp
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Data Ingresso Materiale/ Date of Material Arrival: **26/07/2023**

Data Rapporto di prova/ Test Report Date: **03/08/2023**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Order: 1724001828 - 12.09.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000948

Protocol: CTCERC20240000900 * CERTIFIED TRUE COPY * Issued 09-10-2024

s. marking: 1080SA023 - Qty:2,00

ESS

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(A05) B.P.10 - F 21501 Montbard Cedex - FRANCE
www.mannesmann-stainless-tubes.com

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Certificat de Réception

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. / Nr. / N° **3-22-09826-rev.01** Pag. 1 / 7

(A06) **Purchaser / Besteller / Acheteur**

RACCORTUBI Spa
Viale De Gasperi
20010 MARCALLO
Milan
Italie

(A07) **Customer Order No / Kundenauftragsnr. / N° Commande Client**

226S

(A08) **SMST-Tubes Order No / Auftragsnr. / N° Commande SMST**

0000291532

SMST-Item

(A09) **Part No / Teilenummer / Part number**

0000291532-000001

(B01) (B02) (B04) **Product Description / Produkt Beschreibung / Description du Produit**

Seamless Stainless Steel Hot Finished Pipes Solution Annealed Pickled / Passivated Plain Ends Square Cut Deburred
Rohre warmgefertigt nahtlos rostfreier Stahl lösungsgeglüht gebeizt / passiviert glatte Enden rechtwinklig gesägt entgratet
Tubes sans soudure Acier Inoxydable Fini à chaud Remis en solution Décapés / Passivés Extrémités lisses coupées d'equerre

Specifications / Spezifikationen / Spécifications ASME SA 790 21;ASME SA 790M 21;ASTM A 790 22;ASTM A 790M 22;NORSOK MDS D51 REV 06;RACCORTUBI RTX_D51S Rev.5; ANSI/NACE MR0103/ISO 17945 2016; ANSI/NACE MR0175/ISO 15156-3 2015

Grade / Werkstoff / Nuance UNS S32760;DMV 25.7N

Tolerances / Toleranzen / Tolérances A 790M / A999

(B03) Supplementary Requirements / Zusatzanforderungen / Éxigences Supplémentaires

None / Keine / Aucune

(B06 - D01) Marking of the Product / Kennzeichnung des Produkts / Marquage du Produit

Technical marking MANNESMANN MST-F - ASME SA 790 / ASTM A 790 - DMV 25.7N - UNS S32760 - NPS 2 X SCH 10S - 60.30 MM X 2.77 MM - SML - HEAT $HEAT_NBR$ - $QUAL_LOT_NBR$ - MADE IN FRANCE - $ORDER_ID$

Country of Origin of the tubes / Herstellungsland der Rohre / Pays d'origine des tubes **France / Frankreich / France**

Quantity / Menge / Quantité						Dimensions / Abmessung / Dimensions			
(B07) Heat Schmelze Coulée	Quality Lot Qualitätslos Lot Qualité	SMST-Item	(B08) Pieces Stück Pièces	(B13) Weight Gewicht Poids	(B16) Length Länge Longueur	(B09) OD	(B10) WT	(B11) Ordered Length Auftragslänge Longueur commandée min	(B11) max
CC6519	QL30173864	000001	33	849.00 kg	213.992 m	60.30 mm	2.77 mm	5000 mm	6500 mm
				1871.73 lbs	702.07 ft	NPS 2	SCH 10S	16.40 ft	21.33 ft
				1871.73 lbs	702.07 ft	2.374 "	0.109 "	16.40 ft	21.33 ft
			33	**849.00 kg**	**213.992 m**				
			33	**1871.73 lbs**	**702.07 ft**				

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(A03) No. / Nr. / N° **3-22-09826-rev.01** Pag. 2 / 7

Heat Analysis / Schmelzanalyse / Analyse de Coulée

		Request	C	Si	Mn	P	S	Cr	Ni	Mo	N
	Min		0.00	0.00	0.00	0.00	0.0000	24.0	6.0	3.0	0.20
	Max		0.050	1.0	1.0	0.030	0.0100	26.0	8.0	4.0	0.30
(B07) Heat Schmelze Coulée	Heat Origin Ursprung der Schmelze Origine de la Coulée	(C70) Melting Process Erschmelzungsart Procédé d'élaboration	%	%	%	%	%	%	%	%	%
CC6519	Austria	Airmelt(EAF +AOD)	0.017	0.34	0.48	0.021	<0.0003	25.6	7.1	3.7	0.26

		Request	Cu	W	PREN
	Min		0.50	0.50	40.0
	Max		1.0	1.0	
(B07) Heat Schmelze Coulée	Heat Origin Ursprung der Schmelze Origine de la Coulée	(C70) Melting Process Erschmelzungsart Procédé d'élaboration	%	%	n/a
CC6519	Austria	Airmelt(EAF +AOD)	0.53	0.55	42.0

Product Analysis / Produktanalyse / Analyse sur Produit

ASTM A 790

	Request	C	Si	Mn	P	S	Cr	Ni	Mo	N
	Min	0.00	0.00	0.00	0.00	0.0000	24.0	6.0	3.0	0.20
	Max	0.050	1.0	1.0	0.030	0.0100	26.0	8.0	4.0	0.30
Quality Lot Qualitätslos Lot Qualité	(C00) Sample	%	%	%	%	%	%	%	%	%
QL30173864	39091841	0.019	0.36	0.48	0.011	<0.0010	25.3	7.2	3.9	0.28

	Request	Cu	W	PREN
	Min	0.50	0.50	40.0
	Max	1.0	1.0	
Quality Lot Qualitätslos Lot Qualité	(C00) Sample	%	%	
QL30173864	39091841	0.55	0.56	42.7

Sampling done on tubes in manufacturing length / Beprobung erfolgte an Rohren in Herstelllänge / Echantillonage realisé par longueur de fabrication

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: E45RSD01550200
CURVE 45° LR 2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1080SA023 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

(A01) Salzgitter Mannesmann Stainless Tubes France SAS
(A05) B.P.10 - F 21501 Montbard Cedex - FRANCE
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(A03) No. / Nr. / N° **3-22-09826-rev.01** Pag. 3 / 7

Tensile Test at Room Temperature / Zugversuch bei Raumtemperatur / Essai de traction à température ambiante

ASTM A 370

(C02) Direction: LONGITUDINAL

Coupon Type / Art der Probe / Type du Coupon Test: Plat Type Specimen

		(C14)	(C11)	(C12)	(C13)
			YS 0.2%	U.T.S.	EL
		Width mm	Rp 0,2%	Rm	50mm
Request	Min		550	750	25.0
	Max				
Quality Lot Qualitätslos Lot Qualité	(C00) Sample		MPa	MPa	%
QL30173864	39091841	12.552	635	870	28

Sampling done on tubes in manufacturing length / Beprobung erfolgte an Rohren in Herstelllänge / Echantillonage realisé par longueur de fabrication

(C30) Hardness HRC / Härteprüfung HRC / Essai de dureté HRC

ASTM E 18;EN ISO 6508-1

			(C30) HRC		
		Request			28.0 max
Quality Lot Qualitätslos Lot Qualité	(C00) Sample	Result Ergebnis Resultat	(C31) Min	(C31) Max	(C32) Avg
QL30173864	39091841		24	25	24.5
	39091842		25	26	25.5

Sampling done on tubes in manufacturing length / Beprobung erfolgte an Rohren in Herstelllänge / Echantillonage realisé par longueur de fabrication

(C50) Flattening Test / Faltversuch / Essai d'aplatissement

ASTM A 999

Quality Lot Qualitätslos Lot Qualité	(C00) Sample	Result Ergebnis Resultat
QL30173864	39091841	OK
	39091842	OK

Sampling done on tubes in manufacturing length / Beprobung erfolgte an Rohren in Herstelllänge / Echantillonage realisé par longueur de fabrication

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(A02) EN 10204: 2004 TYPE 3.1

Pitting Corrosion Resistance Test / Prüfung Lochfraßkorrosion / Essai de résistance à la corrosion par piquration

ASTM A 923 METHOD C

	Request Max			10.0000		
	Unit	HOURS	°C	mdd(mg/dm²/day)		
Quality Lot Qualitätslos Lot Qualité	(C00) Sample	Holding time Temps de maintien	Temperature Temperatur Température	Loss Weight Perte de poids	Pitting Piquration	Result Ergebnis Resultat
QL30173864	39091841	24	50	0.4341	No pitting at 20X	Satisfactory

ASTM G48 METHOD A;ISO 17781

	Request Max			1.0000		
	Unit	hours	°C	g/m²		
Quality Lot Qualitätslos Lot Qualité	(C00) Sample	Holding time Temps de maintien	Temperature Temperatur Température	Loss Weight Perte de poids	Pitting Piquration	Result Ergebnis Resultat
QL30173864	39091841	24	50 (+/-1°C)	0.0741	No pitting at 20X	Satisfactory

Micrographic Examination Ferrite / mikroskopische Untersuchung Ferrit / Examen Micrographique Ferrite

ASTM E 562;ISO 17781

			Ferrite Ferritgehalt Mesure de la ferrite par comptage					
		Request		40.0 - 55.0				
Quality Lot Qualitätslos Lot Qualité	(C00) Sample	Result Ergebnis Resultat	(C02) Direction	Result Ergebnis Resultat	Counting method DE Counting method Méthode de comptage	Etch Type Ätzen Type d'attaque	Fields DE Fields Nbre de champs	Evaluation grid DE Evaluation grid Nbre de points par grille
QL30173864	39091841		Transversal	51.7	GRID	Murakami's Etchant N°98	10 MID WT	16

Sampling done on tubes in manufacturing length / Beprobung erfolgte an Rohren in Herstelllänge / Echantillonage realisé par longueur de fabrication

See Test Report N° MET2022102002 in Appendix

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: E45RSD01550200
CURVE 45° LR 2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1080SA023 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

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(A02) EN 10204: 2004 TYPE 3.1

Micrographic Examination Structure / mikroskopische Untersuchung Gefüge / Examen Micrographique Structure

ISO 17781

Quality Lot Qualitätslos Lot Qualité	(C00) Sample			Result Ergebnis Resultat
QL30173864	39091841	Carbides and precipitates Karbide und Ausscheidungen Carbures et précipités	Observations DE Observations FR Observations	Free from carbides and precipitates
			Result Ergebnis Resultat	OK
		Intermetallic Phases Intermetallische Phasen Phases intermétalliques	Direction	Transversal
			Observations DE Observations FR Observations	Free from intermetallics and Sigma phase
			Result Ergebnis Resultat	OK
		Structure Gefüge Structure	Observations DE Observations FR Observations	Regular ferritic-austenitic structure
			Result Ergebnis Resultat	OK
			Type of etching Art der Ätzung Type d'attaque	10% OXALIC ACID FOLLOWED BY 40% KOH

ISO 17781

Quality Lot Qualitätslos Lot Qualité	(C00) Sample			Result Ergebnis Resultat
QL30173864	39091841	Carbides and precipitates Karbide und Ausscheidungen Carbures et précipités	Observations DE Observations FR Observations	Free from carbides and precipitates
			Result Ergebnis Resultat	OK
		Intermetallic Phases Intermetallische Phasen Phases intermétalliques	Direction	Transversal
			Observations DE Observations FR Observations	Free from intermetallics and Sigma phase
			Result Ergebnis Resultat	OK
		Structure Gefüge Structure	Observations DE Observations FR Observations	Regular ferritic-austenitic structure
			Result Ergebnis Resultat	OK
			Type of etching Art der Ätzung Type d'attaque	NaOH 40% Etchant N°220

Sampling done on tubes in manufacturing length / Beprobung erfolgte an Rohren in Herstelllänge / Echantillonage realisé par longueur de fabrication
See Test Report N° MET2022102001 in Appendix

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: E45RSD01550200
CURVE 45° LR 2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1080SA023 - Qty:2,00

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(A02) EN 10204: 2004 TYPE 3.1

(A03) No. / Nr. / N° **3-22-09826-rev.01** Pag. 6 / 7

Other Tests and Declarations / Andere Prüfungen und Prüffeststellungen / Autres Tests et Déclarations

QL30173864

Heat Treatment / Wärmebehandlung / Traitement thermique : ANNEALED BY DIRECT QUENCHING - Water Quenching off the extrusion press - Temperature : 1070°C (1958°F) min - 1140°C (2084°F) max

(D01)	Visual and dimensional inspection (VT) on 100% of tubes according to the order Besichtigung und Maßkontrolle von 100% der Rohre gemäß Auftrag Examen visuel et dimensionel sur 100% des tubes selon la commande	Satisfactory Bestanden Satisfaisant
(D51)	Antimixing Check (PMI) on 100% of tubes Verwechselungsprüfung an allen Rohren mittels Spektralprüfung von 100% der Rohre Contrôle anti-mélange par PMI sur 100% des tubes	Satisfactory Bestanden Satisfaisant
(D52)	Hydro Pressure Test on 100% of tubes 5 sec. at 17.00 MPA ASTM A999 (EP_1107) Wasserdruckprüfung auf 100% Rohren 5 sec. mit 17.00 MPA ASTM A999 (EP_1107) Epreuve Hydraulique sur 100% des tubes 5 sec. avec 17.00 MPA ASTM A999 (EP_1107)	Satisfactory Bestanden Satisfaisant
(D04)	Ultrasonic Testing (UT) on 100% of tubes ASTM E 213 (UT_002_L_T_LA) Ultraschallprüfung von 100% der Rohre ASTM E 213 (UT_002_L_T_LA) Contrôle Ultrasons sur 100% des tubes ASTM E 213 (UT_002_L_T_LA)	Satisfactory Bestanden Satisfaisant

Manufacturing according to NORSOK M650 Rev 4 : QTR 004
Fabrication selon NORSOK M650 Rev 4 : QTR 004
Fertigung gemäß NORSOK M650 Rev 4 : QTR 004

No Weld Repair
Keine Reparaturschweissung
Aucune réparation par soudure

(Z01) SMST declares that the product was manufactured, sampled, tested, inspected and packed in accordance with the specifications and any other requirements designated in the purchase order within the extent listed in SMST order acknowledgment, and has been found to meet such requirements
SMST bestätigt, dass die Rohre hergestellt, beprobt, geprüft, kontrolliert und gepackt wurden in Übereinstimmung mit den Spezifikationen und anderen Anforderungen in der Kundenbestellung innerhalb des Umfanges wie dieser in der SMST Auftragsbestätigung aufgeführt wurde. Die Rohre entsprechen den Auftragsanforderungen
SMST Atteste que les produits sont fabriqués, prélevés, testés, inspectés et emballés en conformité aux spécifications et autres exigences stipulées dans la commande d'achat avec les limites décrites dans l'accusé de réception de la commande. Les produits livrés sont conformes à ces stipulations

Tubes are free from mercury contamination and from radioactive contamination
Die Rohre sind frei von Quecksilberverunreinigungen und frei von radioaktiver Verunreinigung
Les tubes sont exempts de contamination par le mercure et de contamination radioactive

The material is conforming to directive 2000/53/EC and 2011/65/EU
Das Material entspricht den Anforderungen der Richtlinien 2000/53/EC und 2011/65/EU
Le matériau est conforme aux directives 2000/53/EC et 2011/65/EU

Confirmation with reference to Pressure Equipment Directive 2014/68/EU:
The works operates a quality management system that has undergone a specific assessment for materials for pressure equipment and is certified by a competent body (TÜV-SÜD-Cert.No: 05/2022/MAN-01)
Bestätigung in Bezug auf Druckgeräterichtlinie 2014/68/EU:
Das Werk wendet ein Qualitätsmanagementsystem an, das in Bezug auf Werkstoffe für Druckgeräte einer spezifischen Bewertung unterzogen wurde und von einer zuständigen Stelle (TÜV-SÜD-Cert.No: 05/2022/MAN-01) zertifiziert ist.
Confirmation concernant la Directive Equipements sous Pression 2014/68/EU:
L'usine applique un système de management de la qualité qui a fait l'objet d'une évaluation spécifique pour les matériaux pour équipements sous pression et qui est certifié par un organisme compétent (TÜV-SÜD-Cert.No: 05/2022/MAN-01)

(Z02)	Mill's Inspector Werkssachverständiger Le Contrôleur usine	**Stephanie Monsat (IU)**	Date of Edition Ausgabedatum Date d'Édition	**20/10/2022**

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Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: E45RSD01550200
CURVE 45° LR 2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1080SA023 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 10-10-2024

(A01) Salzgitter Mannesmann Stainless Tubes France SAS
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(A02) EN 10204: 2004 TYPE 3.1

Certificate anti counterfeiting check
Prüfung der Zeugnisse gegen Fälschung
Contrôle de la contrefaçon des certificats

A set of information from the Inspection Certificate cover page are included in encrypted form in the above QR code. By scanning it with your mobile device you can check if the Inspection Certificate is genuine.
Ein Teil der Informationen der ersten Zeugnis-Seite sind in verschlüsselter Form in dem oben dargestellten QR Code enthalten. Beim Scannen mit einem mobilen Gerät kann das Zeugnis auf Authentizität geprüft werden.
Une partie des informations contenues dans la première page de ce certificat d'inspection sont disponibles sous forme cryptée dans le "QR Code" ci-dessus. Lors de la lecture avec votre appareil mobile, vous pouvez vérifier l'authenticité du certificat d'inspection.

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 20 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: E45RSD01550200
CURVE 45° LR 2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1080SA023 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
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ESSAIS METALLURGIQUES
(METALLURGICAL TESTS)

PROCES VERBAL D'ESSAI (TEST CERTIFICATE) Né MET2022102002 Rev 00

Commande Né (Order Né) QL30173864 291532 Item 01	Client : RACCORTUBI Spa (Customer)	
Aci¶rie: (Steelworks) BOHLER	Coul¶e Né (Heat Né) CC6519	Nuance (Grade) : DMV25.7N
Dimensions finales (Final size) 60,30 x 2,77 mm	Dimensions de l'¶chantillon (Sample size) 60,30 x 2,77 mm	
Essai contractuel : OUI Contrctual testing : YES		
Documents applicables : (Applicable test documents) Labmet 002 Rev 04		

TAUX DE FERRITE (FERRITE MEASUREMENT) NORME : ISO 17781 + ASTM E562

Impositions (Requirements) : MDS D51 Rev.6: 40% to 55%

R¶sultats (Results)

Rep· re (Ident. Sample)	M¶thode par micrographie ASTM E562 + ISO17781//Micrographic Method ASTM E562 + ISO 17781 - Murakami's etchant (Né98 according ASTME407) - Checked at MX200			
			Mid Wt	Ra%
39091841	Number of fields :	10 Average	51,70%	3,00

(Remarks) Grid of 16 points

R¶sultats conformes aux impositions : OUI
(Results conforming to requirements) YES

Visa du client :
(Customer)

Fait le (Date of test) 20-oct-22

Essai r¶alis¶ par : L.ROUYER
(Test performed by)

V¶rifi¶ et approuv¶ par : T.POMMERY
(Reviewed and approved by)

Page 1/1

Laboratoire de SALZGITTER MANNESMANN STAINLESS TUBES , route de semur 21501 MONTBARD France
Tel : 03 80 89 51 61

MANNESMANN STAINLESS TUBES
A Member of the Salzgitter Group

ESSAIS METALLURGIQUES
(METALLURGICAL TESTS)

PROCES VERBAL D'ESSAI (TEST CERTIFICATE) NéMET2022102001
Rev 00

Commande Né QL30173864 (Order Né) 291532 Item 01	Client : RACCORTUBI Spa (Customer)	
Aci¶rie: BOHLER (Steelworks)	Coul¶e Né CC6519 (Heat Né)	Nuance : DMV25.7N (Grade)
Dimensions finales (mm) 60,30 x 2,77 mm (Final size)	Dimensions de l'¶chantillon (mm): 60,30 x 2,77 mm (Sample size)	
Essai contractuel : Oui (Contractual testing) Yes		
Documents applicables : (Applicable test documents)	Labmet 003 Rev 04	

STRUCTURE (STRUCTURE EXAMINATION) NORME: ISO 17781

Instrument : Microscope Né C9-180

Impositions (Requirements) : MDS D51 Rev.6: Microstructure 500 x magnification (OD/Mid WT/ID) with the etchant 20% NaOH and etchant 10% oxalic acid followed by etchant 40% KOH with reported photo: free from lamination, cracks, or detrimental defects, precipitates, carbides, nitrides&intermetallic phases.

Magnification x500

R¶sultats (Results)

Rep· res (Ident. Sample)	Observations (Remarks)
39091841	Free from lamination, cracks, or detrimental defects, carbides, precipitates, nitrides&intermetallic phases. Photo M x500

R¶sultats conformes aux impositions : OUI
(Results conforming to requirements) YES

Visa du client :
(Customer)

Fait le (Date of test) 20-oct-22	Essai r¶alis¶ par : L,ROUYER (Test performed by)	V¶rifi¶ et approuv¶ par : T.POMMERY (Reviewed and approved by)
Page 1/1		

Laboratoire de SALZGITTER MANNESMANN STAINLESS TUBES, route de semur 21501 MONTBARD France
Tel : 03 80 89 51 61

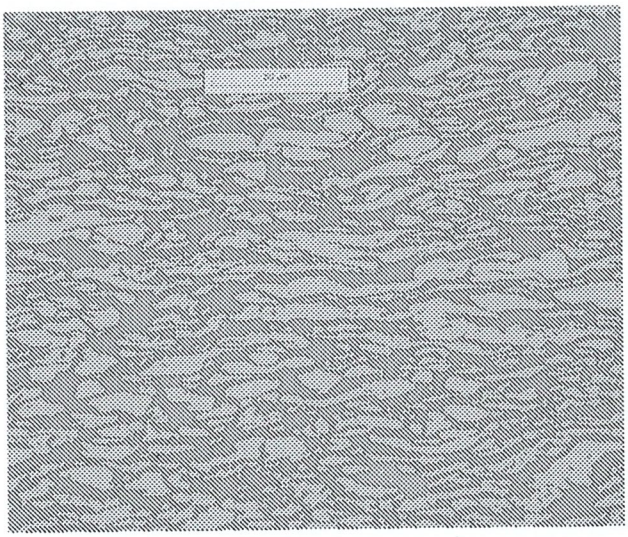
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PLANCHE DE PHOTOMICROGRAPHIES MICROPHOTOGRAPHS EXHIBIT		
	Quality Lot Né: QL 30173864	Client: RACCORTUBI Spa Customer
Aci¶rie : BOHLER Steel works	Certificat Né : MET2022102003 Certificate	Né C de Client : Customer order Né
Né de Coul¶e : CC6519 Heat Né	Nuance : DMV25.7N Grade	Dimensions : 60.30 x 2.77 mm Size

Exam :
Structure

Section :
Transversal

Etchant :
NaOH 20%
Etchant Né220



Rep· re ¶chantillon

Specimen id˘s:
39091841

Dimensions/Size:
60.30 x 2.77 mm

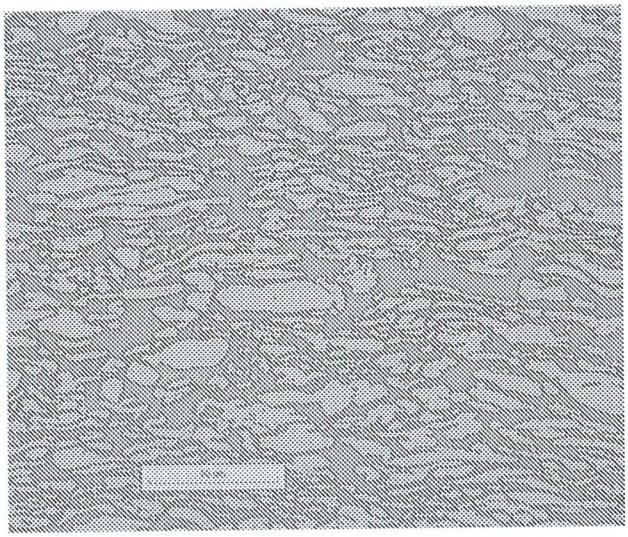
Free from intermetallic phase

Magnification x500

Exam :
Structure

Section :
Transversal

Etchant :
Oxalic acid 10%
followed by
KOH 40%



Rep· re ¶chantillon

Specimen id˘s:
39091841

Dimensions/Size:
60.30 x 2.77 mm

No nitrides, carbides or precipitates

Magnification x500

Date: 20/10/2022
Page 1/2

Technicien, L. ROUYER
The technician in charge of the test

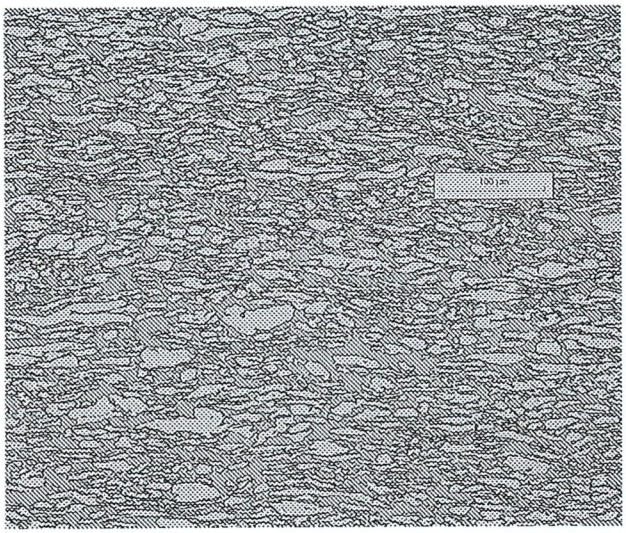
MANNESMANN
STAINLESS TUBES
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PLANCHE DE PHOTOMICROGRAPHIES MICROPHOTOGRAPHS EXHIBIT		
	Quality Lot Né: QL 30173864	Client: RACCORTUBI Spa Customer
Aci¶rie : BOHLER Steel works	Certificat Né : MET2022102003 Certificate	Né C de Client : Customer order Né
Né de Coul¶e : CC6519 Heat Né	Nuance : DMV25.7N Grade	Dimensions : 60.30 x 2.77 mm Size

Exam :
Ferrite

Section :
Transversal

Etchant :
Murakami˘s
Etchant 98



Rep· re ¶chantillon

Specimen id˘s:
39091841

Dimensions/Size:
60.30 x 2.77 mm

Magnification x200

Date: 20/10/2022
Page 2/2

Technicien, L. ROUYER
The technician in charge of the test

Materiale base - Fabbricante: TUBACEX Cert. No.: 734881
Raw material - manufacturer/Materiel du depart - fabriquant: SMLS PIPES TO ASTM A-790 UNS S32760
TUBACEX Cert. No.: 734881

Test produzione Production test/Coupon de production	**Caratteristiche meccaniche** Mechanical Properties/Caracteristiques Mechaniques							
Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS	**Colata N.** Heat N. Couléè N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement 2"	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
QTR: 01/SDSS/A Rev.5 Specimens location drawing as per relevant QTR	58746	91/24	579	808	29.9	HRC<28	HRC 25	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Couléè N.	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**Mo**	**Cu**	**Nb**	**W**	**Co**	**N**	**PRE**	**FERRITE**
58746	0,013	0,26	0,76	0,024	0,0005	25,58	6,75	3,64	0,64	0,024	0,610	0,056	0,248	41.560	48.2

Prove
Tests/Tests

Altri G-48 MET.A
Others
Autres

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità

Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/EU annex I para 4.3
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTORY
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262 Pr
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.: 7328/24
- MATERIAL AND TESTS ACCORDING TO M-630 REV.7 - MDS D53 REV.6
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT WITH RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS ACC. TO ASTM A380
(*) Material marked with certificate number as per relevant code.

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000394
Protocol: CTCERC20240008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024
Mfg. marking: 1031SA024 - Qty:3,00
LESS

Pcs. marking: 1031SA024 - Qty:3,00

MLESS

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240003948

Protocol: CTCERC20240008900 * CERTIFIED TRUE COPY * Issued 09-10-2024

Prova di "pitting" in ferro-cloruro/ Ferric chloride pitting test [Decision rule: Qs]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimensioni/ Dimension Lunghezza/ Length	Larghezza/ Width	Spes
39705	ASTM G48 – 11 (R2020)e1 Method A	**RTX_D53 Rev.9**	B L FT	Meccanica/ Mechanical	51,08	28,46	

Condizioni superficiali/ Surface condition	Lavorato/ Machined
Temperatura di prova/ Test temperature (°C)	50
Tempo di esposizione (ore)/ Exposure time (hours)	24

Data e ora inizio/ Initial date and time	Data e ora fine/ End date and time
02/04/2024 08:42:58	03/04/2024 08:42:58

Peso iniziale/ Initial weight (g)	31,1547
Peso finale/ Final weight (g)	31,1545
Perdita di peso/ Weigth loss (g)	0,0002
Perdita di massa/ Specimen mass loss	
Limite perdita di massa max/ Limit Specimen mass loss max	

Soluzione/ Solution FeCl3 6% SOLUTION

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X/ NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata/ Examined area cm² 29,07 (LxWx2)/100

Esito/ Conclusion: **Conforme a 'Specifica'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifi
una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scr
This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only t
ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer w

		Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
Data Ingresso Materiale/ Date of Material Arrival	**27/03/2024**				
Data Rapporto di prova/ Test Report Date	**04/04/2024**	Antonielli Stefano	Amani Paolo		
	firmato elettronicamente/electronically signed				

Protocol: CTCERC02400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024
Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT02400003948
Specs. marking: 1031SA024 - Qty:3,00
LESS

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti/ Determining volume fraction by systematic m

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Ingrandimento/ Enlarg
39701	ASTM E562 – 19e1	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	20% NaOH	500 X

		Valore Min/ Value Min	Valore Max/ Value Max
Ferrite Vv (% Frazione di volume)/ Vv (% Volume Fraction)	48.2	**40**	**55**
s 3,8 95% C.I. 1,4	%RA 2,94		

Ferrite % Frazione di volume per ci

1	**48**	2
6	**54**	7
11	**44**	12
16	**48**	17
21	**48**	22
26	**52**	27

Nr. di campi per provino/sezione/spaziatura/angolo/ Nr. of fields for specimens/section/angle: 30 / 3.00 x 20 mm / 1 x 3.0 mm / 45°

Esito/ Cor

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Speci una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione s
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Data Ingresso Materiale/ Date of Material Arrival	**27/03/2024**	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
Data Rapporto di prova/ Test Report Date	**04/04/2024**	*Antonielli Stefano*	*Amani Paolo*		
	firmato elettronicamente/electronically signed				

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticita/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

ANL 7328 / 24

Rif. Lab SIM (FCP) : **2498 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order: **MASTER PLAN APRILE 2024/2**

Commessa/ Job: **31004/24 24/0088**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 2" SCH. 10S W.T. 2.77 mm	1		91/24	58746	**ASTM A 815-23 UNS S32760**

ANALISI SPETTROMETRICA AD EMISSIONE ATOMICA A SCINTILLA/ Spark Atomic Emission Spectrometry

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Temperatura di prova/ Test temperature (°C)	ID Gruppo/ Group ID	Unità di misura/ Unit of measure	Data esecuzione/ Date of Testing
39708	PO 04-145 RC R13:2024	RTX_D53 Rev.9	B / UP	20 °C	10470	% by weight	03/04/2024

			Min.	Max.				Min.	Max.				Min.	Max.
C	0,014	±0,003		0.030	Nb					Fe				
Si	0,27	±0,02		1.00	Ti					Ca				
Mn	0,78	±0,05		2.00	W	0,62	±0,06	0.50	1.00	Ta				
P	0,024	±0,003		0.030	Pb					Sb				
S	0,002	±0,001		0.010	Sn					H				
Cr	25,7	±0,3	24,0	26,0	As					Cd				
V					B					Se				
Mo	3,7	±0,2	3.0	4.0	N	0,26	±0,02	0.20	0.30	Bi				
Ni	6,8	±0,4	6.0	8.0	La					Hg				
Cu	0,65	±0,05	0.50	1.00	Mg									
Ce					Zr									
Al					Zn									
Co					O									

FORMULAS			Min.	Max.
*PREN	42,07	±0,72	40.00	

Decision rule:
the result is "Compliant to Specification" when:
- *Result-U ≥ Lower Limit (<2,5 %PFA)*
- *Result+U ≤ Upper Limit (<2,5 %PFA)*
- *Result-U≥ Lower Limit and Result+U≤ Upper Limit (<5 %PFA)*

When the result falls within the uncertainty range at the limit value, the result is Not Compliant.
Where U is the Uncertainty and PFA is the Probability of False Accept (ILAC-G8:09/2019)

The symbol * before the element or formula indicates a value that is outside the Laboratory's accredited range for that element/formula.The symbol (!) means that the sensitivity of the instrument does not satisfy the required number of significant digits.
Expanded uncertainty above reported is based on standard uncertainty multiplied by a coverage factor k = 2 that corresponds to a coverage probability of about 95% for a normal distribution. The evaluation is based on EA 4/16 Ed. 2003

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
27/03/2024				
Data Rapporto di prova/ Test Report Date: 04/04/2024	Antonielli Stefano	Amani Paolo		
firmato elettronicamente/electronically signed				

DECISION RULE:
- Ql → Qualitative
- Qs → Semi-quantitative
- Qn → Quantitative (Implicit Uncertainty)
- Qi → Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment. The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [/]-/; [B]-Specimen in Base Material; [UP]-external sup.

raccortubi Heat num. or Pcs. marking: 1031SA024 - Qty:3,00

Customer: ROSETTI MARINO S.p.A.

Description: E90RSD01650200 CURVE 90° LR 2" SCH.10/S SEAMLESS

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY * Issued 09-10-2024

Protocol: CTCERC20240008900 * CERTIFIED TRUE COPY * Issued 09-10-2024

Mfrs. marking: 1031SA024 - Qty:3,00

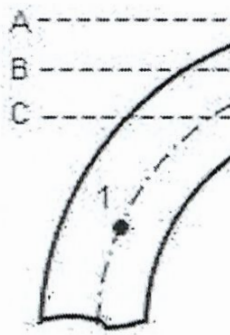
ILESS

PROVA DI DUREZZA HV10 - HV30 - HV5/ HV10 - HV30 - HV5 hardness test [Decision rule: Qn

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Temp./ Temp.
39700	ASTM E92 – 23 (only Vickers)	RTX_D53 Rev.9	B T	20 °C

(B1) - Base Material — **MAX 286**

HV10	1	275	2	268	3	278



Position	Average	
(B1) - Base Material	274	HV10

Esito/ Conclusion: **Conforme a 'Specifica'/ Comp**

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Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
27/03/2024				
Data Rapporto di prova/ Test Report Date: 04/04/2024	Morresi Davide	Amani Paolo		

firmato elettronicamente/electronically signed

ESAME MICROGRAFICO/ Micrographic examination [Decision rule: Qs]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
39702	ASTM E3 – 11(R2017) / ASTM E407 – 23	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	03/04/2024

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	10% Oxalic	Specimen in Base Material 3.0 x 20.0 = 60.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da nitruri. / Structure free from nitrides.

Esito/ Conclusion:

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Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
27/03/2024				
Data Rapporto di prova/ Test Report Date **04/04/2024** firmato elettronicamente/electronically signed	*Antonielli Stefano*	*Amani Paolo*		

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240003948
Protocol: CTCERC20240008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024
cs. marking: 1031SA024 - Qty:3,00
LESS

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
39703	ASTM E3 – 11(R2017) / ASTM E407 – 23	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	03/04/2024

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	20% NaOH	Specimen in Base Material 3.0 x 20.0 = 60.0 mm²



Esito/ Conclusion:

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Spec
una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione s
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ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer

Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
27/03/2024				
Data Rapporto di prova/ Test Report Date **04/04/2024** firmato elettronicamente/electronically signed	*Antonielli Stefano*	*Amani Paolo*		

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240003948

Protocol: CTCERC20240008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

ess. marking: 1031SA024 - Qty:3,00

LESS

Pcs. marking: 1031SA024 - Qty:3,00
MLESS

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio/ Detecting Detrimental Intermetallic Phase: Sodium Hydr

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
39707	ASTM A923 – 23 Method A	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	03/04/2024

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	40g NaOH to 100g distilled water	Specimen in Base Material



Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure.

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion:

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specific
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ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer w

		Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
Data Ingresso Materiale/ Date of Material Arrival	**27/03/2024**				
Data Rapporto di prova/ Test Report Date	**04/04/2024**	*Antonielli Stefano*	*Amani Paolo*		

firmato elettronicamente/electronically signed

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240003948
Protocol: CTCERC20240008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

Individuazione di fasi intermetalliche dannose. Prova di corrosione per pitting in cloruro ferrico/ Detecting Detrimental Intermetallic Phase: Ferric

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimens	
					Lunghezza/ Length	Largh
39706	ASTM A923 – 23 Method C	**RTX_D53 Rev.9**	B L FT	Meccanica/ Mechanical	51,35	

Condizioni superficiali/ Surface condition	Lavorato/ Machined		
Temperatura di prova/ Test temperature (°C)	50		
Temperatura Minima Rilevata/ Minimum temperature observed (°C)		49,71	
Temperatura Massima Rilevata/ Maximum temperature observed (°C)		50,47	
Tempo di esposizione (ore)/ Exposure time (hours)	24		

Data inizio/ Initial date	Data fine/ End date
02/04/2024 09:04:26	03/04/2024 09:04:26

Soluzione/ Solution FeCl3 6% SOLUTION

Peso iniziale/ Initial weight (g)	30,8719	
Peso finale/ Final weight (g)	30,8713	
Perdita di peso/ Weigth loss (g)	0,0006	
Perdita di massa/ Specimen mass loss	0.2	(g

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ES
NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED A

Velocità di corrosione/ Corrosion speed

Limite velocità di corrosione (mg/(dm²*d)) max/ Corrosion rate li

Esito/ Conclusion:

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specif una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione sc
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Data Ingresso Materiale/ Date of Material Arrival	**27/03/2024**	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
Data Rapporto di prova/ Test Report Date	**04/04/2024** firmato elettronicamente/electronically signed	*Antonielli Stefano*	*Amani Paolo*		

Protocol: CTCERC20240000890O * CERTIFIED TRUE COPY
* Issued 09-10-2024
Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240003948
Specs. marking: 1031SA024 - Qty:3,00
LESS

Customer: ROSETTI MARINO S.p.A.

Description: E90RSD01650200 CURVE 90° LR 2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1031SA024 - Qty:3,00

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240003948

Protocol: CTCERC20240008900 * CERTIFIED TRUE COPY * Issued 09-10-2024

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticita/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

PM 7328 / 24

Rif. Lab SIM (FCP) : **2498 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order: **MASTER PLAN APRILE 2024/2**

Commessa/ Job: **31004/24 24/0088**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 2" SCH. 10S W.T. 2.77 mm	1		91/24	58746	**ASTM A 815-23 UNS S32760**

PROVA DI TRAZIONE A TEMPERATURA AMBIENTE/ Tensile test at room temperature [Decision rule: Qn]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Dimensioni/ Dimension Wth	Ø / Width	ØPipe	Lo (mm)	Posizione di prelievo/ Test position	Temp./ Temp.	Snervamento/ Yield strength			Rottura/ Tensile strength Rm		Allungamento/ Elongation after fracture		Strizione/ Area Reduction	S/R/ Ratio Yield strength / Tensile strength	Data esecuzione/ Date of Testing
			mm					°C	MPa		MPa	MPa		A (%)		Z (%)		
39698	ASTM A370 – 23 §6÷14, § A1.3, § A2.2 and § A3.2	**Material Standard**	2,99	12,51		50,00	B L FT	23,0	(≥550)	Rp0,2% **579**		(≥750)	**808**	(≥25)	**29,9**			03/04/2024

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

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Data Ingresso Materiale/ Date of Material Arrival: **27/03/2024**

Data Rapporto di prova/ Test Report Date: **04/04/2024**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer

DECISION RULE:
- Ql → Qualitative
- Qs → Semi-quantitative
- Qn → Quantitative (Implicit Uncertainty)
- Qi → Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.

The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

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INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RÉCEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 734881 Page: 1 / 6	Rev:
Created on: Date: 29.06.2022	Modified on: 12.07.2022

TTI - TUBACEX TUBOS INOXIDABLES

Registro Mercantil de Alava, Tomo 587, Folio 189, Hoja VI 2885 - N.I.F. A-01140227

Tres cruces, 8
01400 Llodio (Alava)
SPAIN

TL: 946721350
FAX: 946725062
E-MAIL:

CUSTOMER DESCRIPTION/DESCRIPCIÓN DEL CLIENTE/KUNDENBEZEICHNUNG/COMMETTANT

CLIENT SOLD TO/SOLICITANTE/AUFTRAGGEBER/COMMETTANT

TSS
TUBACEX SERVICE SOLUTIONS, S.A.U
POLIGONO INDUSTRIAL SARATXO
01470 AMURRIO

SOLD TO:RACCORTUBI S.P.A.
SOLD P.O. REF.:00000139 S
SOLD ORDER REF.:375848
COPY NUMBER: 005

CLIENT ORDER/PEDIDO CLIENTE/KUNDEN AUFTRAGSNUMMER/NO.DE COMMANDE: I009503

SALES ORDER/PEDIDO VENTAS/AUFTRAGSNUMMER/NO.DE COMMANDE D'USINE:

AENOR Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order#s requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

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INGENIERIA DE CALIDAD

Iñigo Arriola Alcibar

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: E90RSD01650200
CURVE 90° LR 2" SCH.10/S SEAMLESS

raccortubi

Heat num. or Pcs. marking: 1031SA024 - Qty:3,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

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Number: 734881 Page: 2 / 6	Rev:
Created on: Date: 29.06.2022	Modified on: 12.07.2022

MATERIAL:SEAML. STAINL. STEEL TUBES/PIPES/TUBOS INOXIDABLES SIN SOLDADURA/TUBES INOX SANS SOUDURE/NAHTLOSE EDELSTAHLROHRE

HEAT-TREATED, PICKLED / TRATADO, DECAPADO / HYPERTREMPE, DECAPE / WÄRMEBEHANDELT, GEBEIZT, PASSIVATED AS PER ASTM A380 / PASIVADO SEGUN ASTM A380 / PASSIVÉ (ASTM A380) / PASSIVIERT (ASTM A380)

GRADE / ACERO / GRADE / WERKSTOFF: S32760,1.4501,

STANDARD / NORMA / STANDARD / LIEFERUNG NACH: ASME SECT.II PART.A SA790/SA790M-2021 ED.

ASTM A790/A790M-20

EN 10216-5:2013 TC2

EN 10297-2:2005

NORSOK M650 QTR NO.2

NORSOK M630:2020 MDS D51 REV.6

CHECK ANALYSIS

CORROSION TESTED ACC. TO ASTM A262 PRACTICE E

CORROSION TESTED ACC. TO ASTM A923 TEST METHOD C

CORROSION TESTED ACC. TO ASTM G48 TEST METHOD A

CORROSION TESTED ACC. TO EN ISO 3651-2 PRACTICE B

SHELL ES/247 REV.2 EXCEPT DPI (TABLE 1) AND SURFACE REQUIREMENTS (POINT 9.1)

HYDROTEST

ANSI/NACE MR0103/ISO 17945:2015

ANSI/NACE MR0175/ISO15156-3:2015

QAD 68 REV.0

RTX_D51S REV.4

SHELL MESC SPE 74/014 FEBRUARY 2020 EXCEPT:

NO LIQUID PENETRANT TEST (POINT 14.12.1),

TENSILE TEST ONLY IN LONGITUDINAL DIRECTION.

ULTRASONIC TEST ONLY FOR LONGITUDINAL DEFECTS.

IMPACT TEST (if applicable): Lateral expansion 0.38 mm. minimum.

ULTRASONIC TEST ACC. TO ASTM A999/A999M / ASTM E213

TOLERANCES / TOLERANCIAS / TOLERANCES / TOLERANZEN NACH: ASME SECT.II PART.A SA999/SA999M-2021 ED.

ASTM A999/A999M-18

EN ISO 1127/03.97 D3/T3

RANDOM LENGTHS / LARGOS VARIABLES / LONGUEUR COURANTE / EINGEENGTE LÄNGE 6.000/7.000 MM

PLAIN ENDS / LISOS / EXTRÉMITÉ D'EQUERRE / GLATTE ENDEN,

DIMENSIONS/DIMENSIONES/DIMENSIONS/DIMENSIONS: 60,33 X 2,77 MM - 2" SCH 10S

COLD FINISHED/LAMINADOS EN FRIO/KALTGEFORMT/LAMINES A FROID

Sales Item Pos Ped. AuftrgPos Usine Pos	Client Item Pos Clnt Kunde Pos Com. Pos	Delivery No Nº Entrega Lieferung Avis. d'exp	Lot No. Nº lote Los Nr. Lot d`inspection	Heat No Colada Schmelze Coulée	Pieces Piezas Stück Pcs	Weight Peso Gewicht Poids	Tot Lgth Long. Tot Gesamtlänge Tolength	Un Lgth Long. Un Längentyp Long. Un
10		8110074401	P2202636	58746	21	576 KG	141,71 M	6000-7000 MM

RAW MATERIAL/DATOS MATERIAL/VORMATERIAL/MATIERE PREMIERE

Heat Nr:	Supplier	Method
58746	ACERALAVA (SPAIN)	Electric furnace+AOD

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AENOR Gestión Ambiental UNE-EN ISO 14001

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TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

Iñigo Arriola Alcibar

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: E90RSD01650200
CURVE 90° LR 2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1031SA024 - Qty:3,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

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Number: 734881 Page: 3 / 6	Rev:
Created on: Date: 29.06.2022	Modified on: 12.07.2022

CHEMICAL COMPOSITION (%)/COMPOSICIÓN QUÍMICA (%)/CHEMISCHE ZUSAMMENSETZUNG (%)/COMPOSITION CHIMIQUE(%)

*L: Ladle C:Products

*	Heat	Seq	C	Mn	Si	P	S	Ni	Cr	Mo	Al	Cu
L	58746	1	0,013	0,76	0,260	0,024	0,0005	6,75	25,58	3,64	0,011	0,64
C	58746	6	0,013	0,76	0,270	0,023	0,0005	6,75	25,40	3,68	0,001	0,64
C	58746	7	0,013	0,76	0,270	0,023	0,0005	6,75	25,50	3,62	0,010	0,64

*	Heat	Seq	V	Nb	W	Co	N	Pren
L	58746	1	0,056	0,024	0,610	0,056	0,2480	41,5600
C	58746	6	0,058	0,025	0,610	0,057	0,2480	41,5120
C	58746	7	0,058	0,025	0,610	0,057	0,2480	41,4140

HEAT TREATMENT/TRATAMIENTO TÉRMICO/WÄRMEBEHANDLUNG/TRAITEMENT THERMIQUE

HIPERTEMPLADOS A 1100 °C , 7 min , Agua
SOLUTION ANNEALED AT 1100 °C , 7 min , WATER
HYPERTREMPES 1100 °C , 7 min , L' EAU
LOESUNGSGEGLUEHT 1100 °C , 7 min , Wasser

TENSILE TEST/TEST DE TENSIÓN/ESSAI TRACTION/ZUGVERSUCH

Lot No.	Sample	T	Rp0.2	Rp1.0	Rm	A2"	A5	Type	Spc.Type	Spc.Dim
		°C	*MPa*	*MPa*	*MPa*	*%*	*%*			*mm*
P2202636	1	20	697	766	873	33	33	L	S	20,01
	2	20	676	749	849	33	33	L	S	19,99

CORROSION ACCORDING TO ASTM A923 C/CORROSION DE ACUERDO ASTM A923 C/CORROSION SUIVANT ASTM A923 C/CORROSION ACCORDING TO ASTM A923 C

Lot No.	Sample	T	Pits-20x	Wloss	time
		°C		*MDD*	*Horas*
P2202636	1	50	N	2,6070	24,0

Corrosion test ASTM G48 practice A/Corrosión ASTM G48 práctica A/TEST DE CORROSION ASTM G48 practice A/LOCHFRASSTEST ASTM G 48 PR.A

Lot No.	Sample	T	Pits-20x	W.loss	time
		°C		*g/m2*	*Horas*
P2202636	1	50	N	0,2607	24,0

Lot No.	Sample	FOTO	MAGN
P2202636	1	0	20

HARDNESS TEST/TEST DE DUREZA/DUREE/HÄRTEPRÜFUNG

Lot No.	Sample	0°Ext1	0°Ext2	0°Ext3	0°Int1	0°Int2	0°Int3	90°Ext1	90°Ext2	90°Ext3	90°Int1	90°Int2	90°Int3	180°Ext1
		HRC	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*
P2202636	1	17,4	18,1	16,9	15,6	17,2	16,2	15,6	16,2	15,1	14,7	16,2	17,0	18,7

Lot No.	Sample	180°Ext 2	180°Ext3	180°Int1	180°Int2	180°Int3	270°Ext1	270°Ext2	270°Ext3	270°Int1	270°Int2	270°Int3
		HRC	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*
P2202636	1	20,2	17,9	20,2	16,3	17,1	17,9	17,6	19,8	19,0	19,0	21,1

AENOR Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies orders requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

Iñigo Arriola Alcibar

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: E90RSD01650200
CURVE 90° LR 2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1031SA024 - Qty:3,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
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EN 10204:2004 / 3.1

Number: 734881 Page: 4 / 6	Rev:
Created on: Date: 29.06.2022	Modified on: 12.07.2022

FERRITE ACCORDING TO ASTM E 562/Contenido de Ferrita según ASTM E562/FERRITE SUIVANT ASTM E562/FERRIT ENTSPRECHEND ASTM E562

Lot No.	Sample	%Fer	Dev.Ferr
		%	%
P2202636	1	54,81	1,43

METALURGICAL TESTS/ENSAYOS METALÚRGICOS/METALLURGISCHE PRÜFUNGEN/ESSAIS METALLURGIQUES

ETCH STRUCTURE ACC. ASTM A923 MET.A: UNAFFECTED STRUCTURE. MATERIAL FREE FROM INTERMETALLIC PHASES AND PRECIPITATES. UNIFORM STRUCTURE ACROSS FULL WALL THICKNESS
EXAMEN DE MICROESTRUCUTRA DE ACUERDO A ASTM A923 MET.A: ESTRUCTURA NO AFECTADA. MATERIAL LIBRE DE FASES INTERMETALICAS Y PRECIPITADOS. ESTRUCTURA UNIFORME A TRAVES DEL ESPESOR.
ETCH STRUCTURE ACC. ASTM A923 MET.A: UNAFFECTED STRUCTURE. MATERIAL FREE FROM INTERMETALLIC PHASES AND PRECIPITATES. UNIFORM STRUCTURE ACROSS FULL WALL THICKNESS

INTERGRANULAR CORROSION TEST ACC. TO ASTM A262 PRACT."E": SATISFACTORY
ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ASTM A262 PRACT.E: SATISFACTORIO
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND ASTM A262 PRACT.E: IN ORDNUNG
ESSAI DE CORR. INTERGR. SELON ASTM A262 PRACT.E:SATISFAISANT
INTERGRANULAR CORROSION TEST ACC.TO DIN EN ISO 3651-2 MET.B: SATISFACTORY
ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ISO 3651-2 MET.B: SATISFACTORIO
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND ISO 3651-2 MET."B": IN ORDNUNG
ESSAI DE CORR. INTERGR. SELON ASTM ISO 3651-2 MET."B":SATISFAISANT

NON-DESTRUCTIVE TESTS/ENSAYOS NO DESTRUCTIVOS/ZERSTÖRUNGSFREIE PRÜFUNGEN/ESSAIS NON DESTRUCTIFS

FERRITE CONTENT DETERMINED BY FISCHER FERRITOSCOPE TO 100% OF PRODUCTS
CONTENIDO EN FERRITA MEDIDO CON FERRITOSCOPIO SOBRE EL 100% DEL MATERIAL.
Ferritescope-Test auf 100% des Materials.

100% ULTRASONIC TEST ACC. TO ASTM A999 / E213: SATISFACTORY
100% ENSAYO DE ULTRASONIDOS DE ACUERDO A ASTM A999 / E213: SATISFACTORIO
100% ULTRASCHALLPRÜFUNG NACH ASTM A999 / E.213:IN ORDNUNG
100% ESSAI D´ULTRASON D'ACCORD A ASTM A999 / E.213: SATISFAISANTE
POSITIVE MATERIAL IDENTIFICATION TEST ON EACH TUBE/PIPE BY "X-RAY-FLUORESCENCE-ANALYZER": SATISFACTORY
VERIFICACION DEL GRADO DE ACERO EN CADA TUBO MEDIANTE "ANALIZADOR DE FLUORESCENCIA DE RAYOS X": SATISFACTORIO

AENOR ER Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order#s requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

Iñigo Arriola Alcibar

TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate. TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: E90RSD01650200
CURVE 90° LR 2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1031SA024 - Qty:3,00

Protocol: CTCERC202400008900 * CERTIFICATE COPY
* Issued 09-10-2024

TTI TUBACEX GROUP

INSPECTION CERTIFICATE, CERTIFICADO DE INSPECCIÓN CERTIFICAT DE RÉCEPTION ABNAHMEPRÜFZEUGNIS EN 10204:2004 / 3.1

Number: 734881 Page: 5 / 6	Rev:
Created on: Date: 29.06.2022	Modified on: 12.07.2022

VERWECHSLUNGSPRUEFUNG AN JEDEM ROHR MIT
"RÖNTGEN-FLUORESZENZ-ANALYSATOR": IN ORDNUNG
VERIFICATION DE LA NUANCE SUR CHAQUE TUBE PAR
"X-RAY-FLUORESCENCE-ANALYZER": SATISFAISANT

HYDROSTATIC PRESSURE TESTED AT 170 bar, 2500 PSI DURING 5 SEC ON EACH TUBE/PIPE: SATISFACTORY
ENSAYO HIDROSTÁTICO A 170 bar, 2500 PSI DURANTE 5 SEC EN CADA TUBO: SATISFACTORIO
WASSERDRUCKPRÜFUNG BEI 170 bar, 2500 PSI HALTEZEIT 5 SEC JE ROHR: IN ORDNUNG
ESSAI DE PRESSION HYDROSTATIQUE À 170 bar, 2500 PSI PENDANT 5 SEC SUR CHAQUE TUBE: SATISFAISANT
100% EDDY CURRENT TEST AT ASTM E426: SATISFACTORY
100% ENSAYO DE CORRIENTES INDUCIDAS DE ACUERDO A ASTM E426: SATISFACTORIO
100% WIRBELSTROM PRUEFUNG NACH ASTM E426: O.B.
100% CONTROLE COURANTS FOUCAULT D'APRES ASTM E426: BIEN
100% EDDY CURRENT TEST AT DIN EN 10246-2: SATISFACTORY
100% ENSAYO DE CORRIENTES INDUCIDAS DE ACUERDO A DIN EN 10246-2: SATISFACTORIO
100% WIRBELSTROM PRUEFUNG NACH DIN EN 10246-2: O.B.
100% CONTROLE COURANTS FOUCAULT D'APRES DIN EN 10246-2: BIEN

DIMENSIONAL CHECKING ON EACH TUBE: SATISFACTORY
INSPECCION DIMENSIONAL AL 100% DE LOS TUBOS SATISFACTORIA
100% MASSKONTROLLE: O.B.
VERIFICATION DIMENTIONNELLE AU 100% DES TUBES, SATISFAISANTE

VISUAL INSPECTION ON EACH TUBE: SATISFACTORY
INSPECCION VISUAL AL 100% DE LOS TUBOS, SATISFACTORIA
100% BESIGCHTIGUNG: O.B.
EXAMEN VISUEL AU 100% DES TUBES, SATISFAISANT

TECHNOLOGICAL TESTS/ENSAYOS TECNOLÓGICOS/TECHNOLOGISCHE PRÜFUNGEN/TECHNOLOGICAL TESTS

FLARING TEST: SATISFACTORY
ABOCARDADO S.NORMA: SATISFACTORIO
AUFWEITVERSUCH: IN ORDNUNG
ESSAI D'EVASEMENT: SATISFAISANT

FLATTENING TEST: SATISFACTORY
APLASTADO S.NORMA: SATISFACTORIO
RINGFALTVERSUCH: IN ORDNUNG
ESSAI D'APLATISSEMENT: SATISFAISANT

AENOR Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

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TUBACEX TUBOS INOXIDABLES S.A.U.
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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: E90RSD01650200
CURVE 90° LR 2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1031SA024 - Qty:3,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY * Issued 09-10-2024

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INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RÉCEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 734881 Page: 6 / 6	Rev:
Created on: Date: 29.06.2022	Modified on: 12.07.2022

MARKING/ETIQUETADO/KENNZEICHNUNG/MARKSTEXT

TX2 TX1 TUBACEX 60,33 X 2,77 MM - 2" SCH 10S ASME SA790 ASTM A790 EN 10216-5 TC2 EN 10297-2 S32760 1.4501 CFD CD SMLS HEAT/ PMI-AV LOT NO/ MADE IN SPAIN

REMARKS/OBSERVACIONES/ANMERKUNG/REMARQUES

NO MERCURY, MERCURY COMPOUNDS OR MERCURY BEARING INSTRUMENTS AND/OR EQUIPMENT HAVE BEEN USED ALONG MANUFACTURING AND INSPECTION PROCESS.
DURANTE LOS PROCESOS DE FABRICACIÓN E INSPECCIÓN NO SE HA USADO MERCURIO NI INSTRUMENTOS Y/O EQUIPOS CONTENIENDO MERCURIO O CON COMPONENTES DE MERCURIO.
KEINE QUEKSILBER, BZW. QUECKSILBERVERUNREINIGTES KOMPONENTEN ODER KUGELLAGERINSTRUMENTE UND/ODER GERÄTE SIND BENUTZT WORDEN PRODUKTIONS UND BESICHTIGUNGSPROZESS.
IL N'A PAS ÉTÉ FAIT USAGE DE MERCURE, DE COMPOSÉS CONTENANT DU MERCURE OU DE MATÉRIAUX ET/OU D'INSTRUMENT CONTENANT DU MERCURE TOUT AU LONG DES ÉTAPES DE FABRICATION ET DU PROCESSUS D'INSPECTION ET DE CONTRÔLE.

NO WELDING OR WELD REPAIRS WERE MADE
SIN REPARACION POR SOLDADURA
KEINE SCHWEISSBEARBEITUNG WURDE VORGENOMMEN
SANS RÉPARATION AVEC SOUDURE
MATERIAL MANUFACTURER APPROVED BY TÜV SÜD Industrie Service GmbH
(NOTIFIED BODY 036)TO ISSUE CERTIFICATES OF SPECIFIC PRODUCT CONTROL IN
ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU ANNEX 1 POINT 4.3.
FABRICANTE DE MATERIALES APROBADO POR TÜV SÜD Industrie Service GmbH (ORGANISMO NOTIFICADO 0036) PARA LA EMISION DE CERTIFICADOS ESPECIFICOS DE CONTROL DE PRODUCTO DE ACUERDO AL ANEXO 1, PUNTO 4.3 DE LA DIRECTIVADE EQUIPOS A PRESION 2014/68/EU.
WERKSTOFFHERSTELLER MIT BERECHTIUNG ZUR AUSSTELLUNG VON BESCHEINIGUNGEN ÜBER SPEZIFISCHE PRÜFUNGEN AN DEN WERKSTOFFEN IM GELTUNGSBEREICH DER ZERTIFIZIERUNG UND IN ÜBEREINSTINSTIMMUNG MIT DER DRUCKGERÄTERICHTLINIE 2014/68/EU UND DEN ZUGRUNDE LIEGENDEN SPEZIFIKATIONEN ENTSPR. DER BENANNTEN STELLE NR.0036, TÜV SÜD Industrie Service GmbH
PRODUCTEUR DU MATERIEL APPROUVE PAR TÜV SÜD Industrie Service GmbH N.B. 0036) POUR EMISSION DES CERTIFICATS SPECIFIQUE DE CONTROLE DE PRODUIT SELON LA DIRECTIVE DES EQUIPES A PRESION 2014/68/EU ANNEXE 1 POINT 4.3.

MATERIAL CHARACTERISTICS COMPLY WITH POINT 7.5 OF ANNEX I TO PED BY HAVING AN ELONGATION AFTER RUPTURE AT TENSILE TEST NO LESS THAN 14% AND A BENDING RUPTURE ENERGY AT IMPACT TEST NO LESS THAN 27J AT 20ºC.
LAS CARACTERISTICAS DEL MATERIAL CUMPLEN CON LOS REQUISITOS DEL PUNTO 7.5 DE LA DIRECTIVA PED POR TENER UN ALARGAMIENTO TRAS ROTURA EN EL ENSAYO DE TRACCION NO INFERIOR AL 14% Y PO DE TRACCION NO INFERIOR AL 14% Y POR TENER UNA RESISTENCIA AL IMPACTO NO INFERIOR A 27 J A 20º C.
DIE WERKSTOFF-WERTE ENTSPRECHEN PUNKT 7.5. DER DGRL, ANHANG 1, MIT EINERBRUCHDEHNUNG = 14% IM NORMGEMÄSS DURCHGEFÜHRTEN ZUGVERSUCH UND DER KERBSCHLAGARBEIT = 27J AN EINER ISO - v PRO PROBE BEI EINER TEMPERATUR VON HÖCHSTENS 20ºC
LES CARACTERISTIQUES DU MATERIEL, AYANT UN ALLONGEMENT APRES RUPTURE A L'ESSAI DE TRACTION NON INFERIEUR DU 14% ET UNE RESISTENCE A LA FLEXION PAR CHOC A 20ºC NON INFERIEUR A 27J, SONT CONFORMES AUX PRESCIPTIONS DU PONT 7.5 DE L'ANNEXE I DE PED.

MATERIAL IS FREE OF RADIATION CONTAMINATION
EL MATERIAL ESTA LIBRE DE CONTAMINACION POR RADIACIONES
MATERIAL IS FREI VON RADIOAKTIVITÄT
MATÉRIEL LIBRE DE POLUTION RADIOACTIVE

AENOR Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

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TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

Iñigo Arriola Alcibar

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: E90RSD01650200
CURVE 90° LR 2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1031SA024 - Qty:3,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

TUBACEX GROUP

STRUCTURE EXAMINATION

MTC / Certificate
734881

MATERIAL IDENTIFICATION / IDENTIFICACIÓN DEL MATERIAL

Lot No. / Num Lote	P2202636	Dimension / Dimensión	60,33 x 2,77 mm - 2'SCH 10
Heat / Colada	58746	Grado de acero / Steel grade	S32760

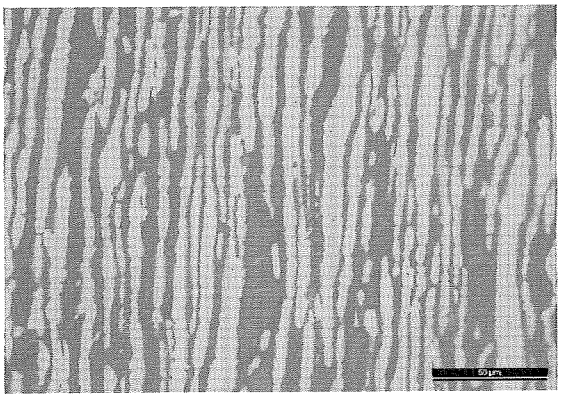
Type Of test / Tipo de Ensayo:	MICROSTRUCTURE EVALUATION

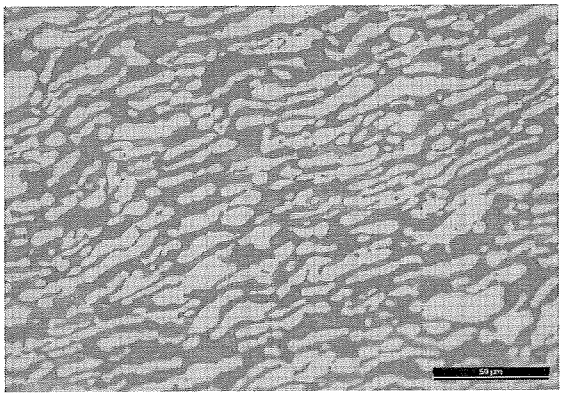
RESULTS / RESULTADO

Result: The microestructure is formed by austenite and ferrite. The presence of intermetallic phases or precipitates is not observed. Uniform structure across full wall thickness Etching method according to ASTM E-407.

Resultado: la microestructura está compuesta por austenita y ferrita. No se observa la presencia de fases intermetálicas y precipitados. Estructura uniforme a través de todo el espesor. Método de ataque según ASTM E-407.

GRAPHICS RECORDS / REGISTROS FOTOGRÁFICOS:





Dir: LONGITUDINAL / MAG: 500X /	Dir: TRANSVERSAL / MAG: 500X /

María Cano
Responsable del Laboratorio
Laboratory Manager

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 30 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: E90RSD01650200
CURVE 90° LR 2" SCH.10/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1031SA024 - Qty:3,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

Viale De Gasperi 19 I 20010
Marcallo con Casone (MI)
ITALY ITALY

15/12/21 | 24.12.2021

STEEL MELTING PROCESS	ORDER STATUS	DIMENSIONS AS PE
EF-AOD	PARTIAL	ASME B16.5 (Ed.

Item Sr.No.	Item Code	ITEM DESCRIPTION	MATERIAL SPEC.	QUANTITY (NOS)	HEAT NUMBER	BATCH NUMBER	HEAT TREAT CONDITI
4.00		1.5 in x 300 # x BLRF (NACE)	ASTM A 182 Gr. F316/316L (Ed.2020)	49	S-25033	GI11130A	Solution t quench

:GASKET FACE FINISH RF: 125-250 AARH **Total Qty Pc** 49

Report Type	Heat No	Batch No	C%	Mn%	Si%	S%	P%	Cr%	Ni%	Mo%	N%
Ladle	S-25033	-	0.0260	1.5400	0.3200	0.0070	0.0430	16.8200	10.0900	2.0800	0.0696
Product	S-25033	GI11130A	0.0250	1.5900	0.3400	0.0080	0.0400	16.8000	10.0600	2.0500	0.0696
Required Value	-	Max	0.0300	2.0000	1.0000	0.0300	0.0450	18.0000	14.0000	3.0000	0.1000
		Min	-	-	-	-	-	16.0000	10.0000	2.0000	-

for Rana

Page 1 of 2

Order: 1724001828 - 12.09.24 - Item n.: 40 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240000003948
Protocol: CTCERC20240000008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024
s. marking: S-25033 - Qty:1,00

SIDERTEST
mechanical chemical non destructive tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant A: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

PT 470 / 24

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Tipo di controllo/ Type of control *Esame con Liquidi Penetranti/ Liquid Penetrant Examination*
Luogo del Controllo/ Test Location: Str. Barianella, 1/B C.S.Giovanni (PC)

Cliente/ Customer	Subcliente/ Subcustomer	Commessa/ Job	Ordine/ Order
Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00003948**	**1724001828 - 123A90A**

Doc. Cliente/ Client's doc.	*Doc. Sider Test/ Sider Test doc.*	*Norma Esecuzione/ Execution Standard*	*Accettabilità/ Acceptance Std*
	PO 04-003 PT Rev. 17 - IL 04-003-001 PT Rev. 05	**ASME BPVC.V-2023 Art. 6 and 24**	**ASTM E 165-23 - ASME BPVC.VIII.1-2023 App. 8**

Tecnica d'Esame/ Examination Technique	Light intensity (Lux)	Condizioni Superficiali/ Surface Condition	Area Esame/ Area Tested
Liquidi Penetranti Solubili in Acqua a Contrasto di Colore/ Water Washable Color Contrast Penetrant Examination (IIAe2)	**>= 1076**	**Materiale Finito/ Finished Material**	**100% accessible surfaces**

Pulizia/ Cleaning		*Penetrante/ Penetrant*		*Rimozione Penetrante/ Penetrant Removal*		*Asciugatura/ Drying*		*Rilevatore/ Developer*	
Tipo/ Type	**Solvent NITRO**	Applicazione/ Application	**Brush**	Tipo/ Type	**Water Sponging**	Tipo/ Type	**Clean rags**	Applicazione/ Application	**Spray**
Intervallo/ Interval (min)	**5'**	Tipo/ Type	**Red K71B2P**	Intervallo/ Interval (min)	**5'**	Intervallo/ Interval (min)	**5'**	Tipo/ Type	**White D112A**
		Bagno/ Batch	**230707P**					Bagno/ Batch	**240507W150s**
		Marca/ Trade Mark	**ELITE**					Marca/ Trade Mark	**ELITE**
		Tempo mi. di penetrazione/ Minimum Penetration Time	**10'**					Intervallo di interpretazione/ Final interpretation interval	**7' ÷ 60'**

Posizione/ Item	Qta/ Qty	Descrizione/ Description	Prova Nr./ Test Nr.	Materiale/ Material	Colata/ Heat
40	**1**	**BLIND 1,1/2" S.300 RF**	**1169**	**ASTM A 182 F316/F316L**	**S-25033**
80	**1**	**W.N. 1,1/4" S.300 RF SCH. 10S**	**1170**	**ASTM A 182 F316/F316L**	**13/555**

Assenza di Difetti/ Absence of Defects

Conforme a 'Accettabilità'/ Conforming to 'Acceptance Std

Regola decisionale adottata per l'uso dell'incertezza di misura quando dichiara la conformità a un requisito specificato: per i controlli NDT il laboratorio monitora le sorgenti di incertezza, ma non la calcola. Non si riporta l'incertezza nel rapporto di prova. Il risultato può essere CONFORME o NON CONFORME/ Decision rule adopted for the use of measurement uncertainty when declaring compliance with a specified requirement: for NDT controls the laboratory monitors sources of uncertainty, but does not calculate it. The uncertainty is not reported in the test report. The result can be COMPLIANT or NON-COMPLIANT

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Accettabilità" riguarda solamente le prove presenti in questo rapporto di prova.Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti./ This test report refers only to the examined sample as received from the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client. Compliance with documents in "Acceptace Std" refers only to the tests described on this test report.Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.

Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Operatore CND Liv. II/ Lev. 2 NDE Operator	Data Ingresso Materiale/ Date of Material Arrival	Data esecuzione/ Date of Testing	Data Rapporto di prova/ Test Report Date	Cliente/ Customer	Ispettori/ Inspector	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
SIDER TEST S.r.l. MAURIZIO DEPIANI LEVEL II SNT-TC-1A	04/10/2024	04/10/2024	07/10/2024			PAOLO AMANI LEVEL 3 SNT-TC-1A

Customer: ROSETTI MARINO S.p.A.

Description: FLB0SS01961H00 BLIND 1.1/2" S.300 RF

raccortubi Heat num. or Pcs. marking: S-25033 - Qty:1.00

Order: 1724001828 - 12.09.24 - Item n.: 40 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT20240003948

Protocol: CTCERC20240008900 * CERTIFIED TRUE COPY * Issued 09-10-2024

GOODLUCK

ADM. OFFICE: II F -166-167,
Nehru Nagar, Ambedkar Road, Ghaziabad

GOOD LUCK ENGINEERING CO.

Works : Khasra No. 2839, Village : Dhoom Manikpur, G.T. Road, Dadri, G.B. Nagar-203207, U.P. (India)
qc1@goodluckindia.com

ISO 9001 - 2015
CERTIFIED COMPANY
CERTIFICATE NO.-IND.21.6268/QM/U

MATERIAL TEST CERTIFICATE

Entry No. : 6479

MECHANICAL TEST REPORT AT ROOM TEMPERATURE IN AS DELIVERED CONDITION	Batch No	Gauge Dia / Size (mm)	Yield Strength (N / mm sq.) (0.2% Proof Stress)	Tensile strength (n/mm Sq.)	Elongation % On GL = 4D	Reduction In Area %	Hardness	Impact Test10X10X55 mm (Charpy 2mm V-Notch)					Grain Size as per ASTM E-112
							HBW	01	02	03	Avg(Joules)	Temp °C	
	GI11130A	8.75	269.30	581.82	52.80	78.47	171,173	- - -	- - -	- - -	- - -	- - -	
	REQUIRED	MIN	205.00	515.00	30.00	50.00	-	-	-	-	-	-	
		MAX	-	-	-	-	-	-	-	-	-	-	

SUPPORTING TESTING	TEST STANDARD	ACCEPTANCE LEVEL	RELEVANT REPORT	SEAL/STAMP OF TPI WITNESS	SEAL / STAMP of Incharge Quality
				ARJUN CHAUDHARY Prepared by:	NIKHIL GUPTA Checked By:

Remark
(1) No Weld repair performed on forging.
(2) Hardness Test carried out on job & found satisfactory.
(3) Material comply all the requirements of PO & Specification.
(4) Material conformed all the requirements of ASTM A961/A961M (Ed. 2020)
(5) No Chinese and East European material is used.
(6) Material 100% visual & dimensional checked & found surface free from all types of defects.
(7) PMI carried out on job (PMI Report No. GLECO/PMI/J-2085/4 DATED 31.03.2022 enclosed) & found satisfactory.
(8) IGC test carried out as per ASTM A262 Practice E Test piece Bend over mandrel Dia = 1t X 180° and reviewed under 20X Mag. Observed "Bend Specimen free of any crack and Grain dropping" Microscopic Structure observed under magnification of 250 X and observed "Step Structure" - Found satisfactory.
(9) Material comply all the requirements of NACE MR0175/ISO 15156 (Ed 2015).
(10) Packing carried out as per PO & Spec.RT_FL_EXEU_2011 and found satisfactory.
(11) Material is free from Mercury & Radioactive Contamination.

We hereby certify that material declared above meets the requirement of P.O./ relevant specification — Identification Mark :

Doc No	Doc Rev No	Date	Effective Date	Doc. Retention Period	Doc. Prepared by	Doc. Approved by	*Recorded document will be prepared, Maintained And preserved by* inchange Quality
QA 11 TCFP 08	04	13/08/2018	13/08/2018	AS SPECIFIED BY CUSTOMER / COMPANY PROCEDURE	MR	Dir.works	for Raccortubi S.P.A. Kmadheshwari 31/03/2022

Document Route
(01) Original copy - Forwarded to CUSTOMER as self certified authentic record from GOOD LUCK ENGG. CO.
(02) 1st Copy - Inchange quality to maintain and preserve the record .

CONTROLLED COPY

CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2008 CERTIFICATE No. 04 100 011022-E3

ADM. OFFICE: 504, SUKH SAGAR, N. S. PATKAR MARG,
MUMBAI 400 007, INDIA
Tel.: 91-22- 66290600. Fax.: 91-22-66290633/34
Website : www.chandansteel.net
Email : csl@chandansteel.net

WORKS: Plot No. 35, G. I. D. C., Umbergaon
Dist Valsad, Gujarat - 396 171.
Tel.: 91-260-256 2066 / 4367 / 1166. Fax.: 91-260-256 2287
E-mail : exports@chandansteel.net

164108

L/c. No. :
L/c. Date:

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORTUBI SPA VIALE DE GASPERI, 194 20010 MARCALLO CON CASONE (MILANO) - ITALIA	Test Certificate No: EXP/0000-18/2013-14 Date of Issue : 21.06.2013 P. O. No. : OS000114 S Invoice No. & Dat: EXP/0000/2013-14 Dtd. 21.06.2013

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES

ARTICLE NO.	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
G6LWN1QS300RFS10SE	13/555	104	66	81.12	316/316L	1 1/4" WNRF 300 LBS S10S	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	

CHEMICAL COMPOSITION (Weight %)

ARTICLE NO.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
G6LWN1QS300RFS10SE	0.030	0.65	1.76	0.031	0.016	16.92	2.02	10.03	-	-	0.0540	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

MECHANICAL PROPERTIES

ARTICLE NO.	0.2% Yield Strength N/mm^2 ($R_{p0.2}$)	Tensile Strength N/mm^2 (R_m)	Elongation %	Reduction of Area %	Hardness (B. H. N.)
G6LWN1QS300RFS10SE	304	589	60	71	174-178
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Remarks:

1.The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions inspection 100%:- OK.
3. PMI Test 100%:- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Micro Structure Reveals Austenitic grains with annealing twins and is free from carbide precipitation (At 500 X).
7. Inter-Granular Corrosion Test (ASTM A262 - 10 (Pr.E)):- Satisfactory.
8. The Material conforms to ASTM A 182 - 11 & Dimension confirms to B16.5 - 09 Specification.
9. The material hardness conforms to NACE MR 0175-09 & NACE MR 0103-07.
10. Surface roughness quality checked by comparator & found 125 - 250 AARH

Witnessed
For T.T.I.
Bhavesh Gandhi
Sr. Surveyor
ASNT L-II-UT/MT/RT/PT
26/06/13

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.

CHANDAN STEEL LTD. FORGING DIVISION

B. S. RAUTELA
MANAGER Q. A.

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 80 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: FLW0SS0765UQ00
W.N. 1.1/4" S.300 RF SCH.10/S

raccortubi Heat num. or Pcs. marking: 13/555 - Qty:1,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

Marine & Offshore

Certificate number: 00891NPL24

www.veristar.com

CERTIFICATE
FOR
PIPE / TUBE AND FITTINGS

Manufacturer	: TECNINOX SRL (production plant of Raccortubi Spa) (SARMATO (PC) - ITA)
Manufacturer's ref. N°	: JOB 478
Supplier	: RACCORTUBI SPA (MARCALLO-MI - ITA)
Purchaser	: ARCUS INOX (Viarmes - FRA)
Purchaser's order N°	: Order 1072051
Shipbuilder	: CHANTIERS DE L'ATLANTIQUE (SAINT-NAZAIRE - FRA)
BV Register N°	: 42644E **Hull N°** : Y34
Requirements	: Bureau Veritas Rules for the Classification of Steel Ships (Jul. 2023)
Product description	: **BW FITTINGS to ASME/ASTM SA/A-403 WP - 316/316L**
Design review	: Reference(s) : N.A.
Quantity	: 35 pcs

Type of product	: ELBOWS
Material grade	: 316/316L
Cast number	: See additional page
Heat number	: See additional page
Manufacturer's certificate number	: See additional page
Material certificate number	: See additional page
Dimensions	: See additional page

Enclosures / Remarks : See certification dossier ARCUS INOX .478
Witness Visual and Dimensional Test.

This certificate is issued by Bureau Veritas Marine & Offshore as per the above Classification Rules and in compliance with the applicable technical requirements therein.

Marking	: 8/ 00891NPL24 marking near to heat number		
Last survey	: 13 May 2024	**Issuance date**	: 13 May 2024
Surveyor	: Andrea Belvisi	**Office**	: BV NAPOLI

This certificate was created electronically and is valid without signature

BUREAU VERITAS MARINE & OFFSHORE INTERNATIONAL REGISTER

This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgment, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

Additional Page

Cliente Customer: ARCUS INOX
Commessa Job N. BV JOB: 0484/NPL/2024
COI:00891NPL24

CHANTIER DE L'ATLANTIQUE - VESSEL N.Y34

Pos. cl. *Item cl.*	Q. Check *Q.ty*	Q.ta' *Q.ty*	Tubi *Tubes*	U.M.	Descrizione *Description*	N. Prova *Test N.*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*	Kg *Kg*
1	3	8	0,00	NR	ELBOWS 90° LR 8" SCH.40/S SEAMLESS FROM PIPE SCH 40S (5000001885-01WG)	398	1008624	172,00
1	3	16	0,00	NR	ELBOWS 90° LR 8" SCH.40/S SEAMLESS FROM PIPE SCH 40S (5000001885-01WG)	399	1009624	344,00
1	3	11	0,00	NR	ELBOWS 90° LR 8" SCH.40/S SEAMLESS FROM PIPE SCH 40S (5000001885-01WG)	400	1010624	236,50

tot 35 pcs.
Surveyor : Andrea Belvisi

****** End Report******

raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2.00

Description: RECOSD08001H01
RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY * Issued 09-10-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5
29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente / **Customer**: RACCORTUBI S.p.A.

Ordine N. / **P.O.N./C.**: Master plan Dicembre 2023/1

Pos. N. / Item/Poste: 11 — **Q.tà** / Q.ty/Q.té: 79

(*) Marcatura e cert. N. / Material Marking e Cert. N.: 1004SA024

Created on: 18-01-2024

Descrizione / Description / Description: CONC.REDS 1.1/2"x1" SCH.40/S SEAMLESS

Specifica / Specification / Spécification: BW FITTINGS TO ASTM A/815M-2023
ASME SA/815-21 UNS S32760
DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: TUBACEX Cert. No.: 705701
Raw material - manufacturer/Materiel du depart - fabriquant: SMLS PIPES TO ASTM A-790 UNS S32760
TUBACEX Cert. No.: 705701

Test produzione / Production test/Coupon de production

Caratteristiche meccaniche
Mechanical Properties/Caracteristiques Mechaniques

Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS	**Colata N.** Heat N. Couléè N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement 2"	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
QTR: 01/SDSS/A Rev.5 Specimens location drawing as per relevant QTR	56144	426/23	628	881	29.3	HRC<28	HRC 24	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Couléè N.	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**Mo**	**Cu**	**Nb**	**Co**	**N**	**W**	**PRE**	**FERRITE**
56144	0,013	0,260	0,67	0,020	0,0004	25,55	6,95	3,65	0,62	0,002	0,045	0,2540	0,63	41.659	49.3

Prove
Tests/Tests

Altri / Others / Autres: G-48 MET.A

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità
Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/EU annex I para 4.3
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTORY
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262 Pr E
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.: 1216/24
- MATERIAL AND TESTS ACCORDING TO M-630 REV.7 - MDS D53 REV.6
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT WITH RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS ACC. TO ASTM A380
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication

Formato a freddo / Cold formed / Formés à froid
Senza saldatura / Seamless / Sans soudure

Ispezione
Inspection/inspéction

Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique

Solubilizzazione a 1130°C

Solution Annealing at 1130°C , water quenching

Hypertrempés à 1130°C

Heat treatment soaking time for 20 minutes, batch n. 0123

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur

raccortubi Heat num. or Pos. marking: 1004SA024 - Qty:2.00
Description: RECOSD08001H01
RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS
Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948
Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

G48ACE 1216 / 24

Rif. Lab SIM (FCP) : **419 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN DICEMBRE 2023/1**

Commessa/ Job **30012/23 23/1099**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		426/23	56144	ASTM A 815-23 UNS S32760

Prova di "pitting" in ferro-cloruro/ Ferric chloride pitting test [Decision rule: Qs]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimensioni/ Dimension mm Lunghezza/ Length	Larghezza/ Width	Spessore/ Thickness	Area/ Area cm²	
6649	ASTM G48 – 11 (R2020)e1 Method A	RTX_D53 Rev.9	B L FT	Meccanica/ Mechanical	49,65	29,06	3,57	34,48	[(LxWx2)+(WxTx2)+(LxTx2)] / 100

Condizioni superficiali/ Surface condition	Lavorato/ Machined
Temperatura di prova/ Test temperature (°C)	50
Tempo di esposizione (ore)/ Exposure time (hours)	24

Data e ora inizio/ Initial date and time	Data e ora fine/ End date and time
24/01/2024 14:35:11	25/01/2024 14:35:11

Soluzione/ Solution FeCl3 6% SOLUTION

Peso iniziale/ Initial weight (g)	40,1066	
Peso finale/ Final weight (g)	40,1062	
Perdita di peso/ Weigth loss (g)	0,0004	
Perdita di massa/ Specimen mass loss	0.1	g/m²
Limite perdita di massa max/ Limit Specimen mass loss max	**1.0**	**g/m²**

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X/ NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata/ Examined area cm² 28,86 (LxWx2)/100

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival	19/01/2024	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
Data Rapporto di prova/ Test Report Date	26/01/2024 firmato elettronicamente/electronically signed	Antonielli Stefano	Amani Paolo		

DECISION RULE:
- Ql → Qualitative
- Qs → Semi-quantitative
- Qn → Quantitative (Implicit Uncertainty)
- Qi → Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment. The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

Customer: ROSETTI MARINO S.p.A.
Description: RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS REC05D08001H01
raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2.00
Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948
Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

SIDERTEST
mechanical chemical non destructive tests
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Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

E562 1216 / 24

Rif. Lab SIM (FCP) : **419 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN DICEMBRE 2023/1**

Commessa/ Job **30012/23 23/1099**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		426/23	56144	**ASTM A 815-23 UNS S32760**

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti/ Determining volume fraction by systematic manual point count [Decision rule: Qn]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Ingrandimento/ Enlargement	Misura del reticolo/ Grid size	Data esecuzione/ Date of Testing
6645	ASTM E562 – 19e1	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	20% NaOH	500 X	Square 5 x 5 = 25 Points	24/01/2024

		Valore Min/ Value Min	Valore Max/ Value Max
Ferrite Vv (% Frazione di volume)/ Vv (% Volume Fraction)	49.3	**40**	**55**
s 4.1 95% C.I. 1.5 %RA 3.09			

Ferrite % Frazione di volume per ciascun campo esaminato/ % Volume Fraction for each metallographic section

1	**48**	2	**44**	3	**42**	4	**52**	5	**44**
6	**46**	7	**44**	8	**46**	9	**54**	10	**50**
11	**52**	12	**54**	13	**46**	14	**48**	15	**48**
16	**52**	17	**52**	18	**54**	19	**44**	20	**44**
21	**54**	22	**52**	23	**54**	24	**54**	25	**48**
26	**54**	27	**44**	28	**52**	29	**50**	30	**54**

Nr. di campi per provino/sezione/spaziatura/angolo/ Nr. of fields for specimens/section/angle: 30 / 3.50 x 20 mm / 1 x 3.0 mm / 45°

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival: **19/01/2024**

Data Rapporto di prova/ Test Report Date: **26/01/2024** firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer

DECISION RULE:
- Ql → Qualitative
- Qs → Semi-quantitative
- Qn → Quantitative (Implicit Uncertainty)
- Qi → Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.

The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

Customer: ROSETTI MARINO S.p.A.
Description: REC0SD08001H01 RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS
raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2,00
Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000003948
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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

ANL 1216 / 24

Rif. Lab SIM (FCP) : **419 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order
MASTER PLAN DICEMBRE 2023/1

Commessa/ Job
30012/23 23/1099

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		426/23	56144	**ASTM A 815-23 UNS S32760**

ANALISI SPETTROMETRICA AD EMISSIONE ATOMICA A SCINTILLA/ Spark Atomic Emission Spectrometry

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Temperatura di prova/ Test temperature (°C)	ID Gruppo/ Group ID	Unità di misura/ Unit of measure	Data esecuzione/ Date of Testing
6652	ASTM E1086 – 22	RTX_D53 Rev.9	B / UP	20	9743	% by weight	24/01/2024

			Min.	Max.				Min.	Max.				Min.	Max.
C	0,015	±0,003		0,030	Nb					Fe				
Si	0,30	±0,02		1.00	Ti					Ca				
Mn	0,69	±0,04		2.00	*W	0,64	±0,04	0.50	1.00	Ta				
P	0,022	±0,005		0.030	Pb					Sb				
S	0,005	±0,001		0,010	Sn					H				
*Cr	25,8	±0,2	24.0	26.0	As					Cd				
V					B					Se				
*Mo	3,7	±0,2	3.0	4.0	*N	0,26	±0,02	0.20	0.30	Bi				
*Ni	7,0	±0,4	6.0	8.0	La					Hg				
*Cu	0,66	±0,04	0.50	1.00	Mg									
Ce					Zr									
Al					Zn									
Co					O									

FORMULAS			Min.	Max.
*PREN	42,17	±0,71	40.00	

Decision rule:
the result is "Compliant to Specification" when:
- *Result-U ≥ Lower Limit (<2,5 %PFA)*
- *Result+U ≤ Upper Limit (<2,5 %PFA)*
- *Result-U≥ Lower Limit and Result+U≤ Upper Limit (<5 %PFA)*

When the result falls within the uncertainty range at the limit value, the result is Not Compliant.
Where U is the Uncertainty and PFA is the Probability of False Accept (ILAC-G8:09/2019)

The symbol * before the element or formula indicates a value that is outside the Laboratory's accredited range for that element/formula.The symbol (!) means that the sensitivity of the instrument does not satisfy the required number of significant digits.
Expanded uncertainty above reported is based on standard uncertainty multiplied by a coverage factor k = 2 that corresponds to a coverage probability of about 95% for a normal distribution. The evaluation is based on EA 4/16 Ed. 2003

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival	19/01/2024	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
Data Rapporto di prova/ Test Report Date	26/01/2024 firmato elettronicamente/electronically signed	Antonielli Stefano	Amani Paolo		

DECISION RULE:
- Ql — Qualitative
- Qs — Semi-quantitative
- Qa — Quantitative (Implicit Uncertainty)
- Qi — Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment. The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [/]-/: [B]-Specimen in Base Material; [UP]-external sup.

Customer: ROSETTI MARINO S.p.A.
Description: RID. CONC: 1.1/2"x1" SCH.40/S SEAMLESS REC0SD08001H01
raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2,00
Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948
Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY * Issued 09-10-2024

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mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

DUR 1216 / 24

Rif. Lab SIM (FCP) : **419 / 24 (A / A)**

LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN DICEMBRE 2023/1**

Commessa/ Job **30012/23 23/1099**

Campione fornito da cliente/ Sample supplied by customer :

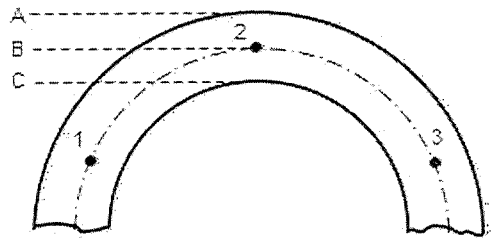
Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		426/23	56144	**ASTM A 815-23 UNS S32760**

PROVA DI DUREZZA HV10 - HV30 - HV5/ HV10 - HV30 - HV5 hardness test [Decision rule: Qn]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position		Temp./ Temp.	Durezza/ Hardness	Data esecuzione/ Date of Testing
6644	ASTM E92 – 23 (only Vickers)	RTX_D53 Rev.9	B	T	20 °C	HV10	24/01/2024

(B1) - Base Material MAX 286

HV10	1	273	2	274	3	273



AB=BC= 1/2 AC

Position	Average		CV%
(B1) - Base Material	273	HV10	0,3

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Ingresso Materiale/ Date of Material Arrival **19/01/2024**

Data Rapporto di prova/ Test Report Date **26/01/2024**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer

DECISION RULE:
- Ql → Qualitative
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- Qa → Quantitative (Implicit Uncertainty)
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The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [SZ]-along the thickness; [T]-trasv.

Customer: ROSETTI MARINO S.p.A.

Description: RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS REC05D08001H01

Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2.00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY * Issued 09-10-2024

SIDERTEST mechanical chemical non destructive tests

Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

MIC 1216 / 24

Rif. Lab SIM (FCP) : **419 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN DICEMBRE 2023/1**

Commessa/ Job **30012/23 23/1099**

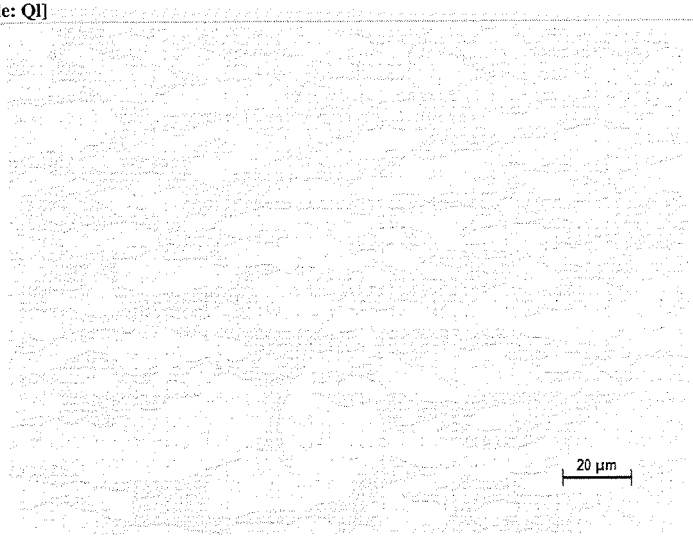
Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		426/23	56144	**ASTM A 815-23 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination [Decision rule: QI]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
6646	ASTM E3 – 11(R2017) + ASTM E407 – 07 (R2015)e1	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	24/01/2024

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	10% Oxalic	Specimen in Base Material 3.5 x 20.0 = 70.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da nitruri. / Structure free from nitrides.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
19/01/2024	Antonielli Stefano	Amani Paolo		
Data Rapporto di prova/ Test Report Date: **26/01/2024** (firmato elettronicamente/electronically signed)				

DECISION RULE:
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The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

Customer: ROSETTI MARINO S.p.A.

Description: REC05D08001H01
RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2.00

Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

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RAPPORTO DI PROVA/ TEST REPORT

MIC 1216 / 24

Rif. Lab SIM (FCP) : **419 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order
MASTER PLAN DICEMBRE 2023/1

Commessa/ Job
30012/23 23/1099

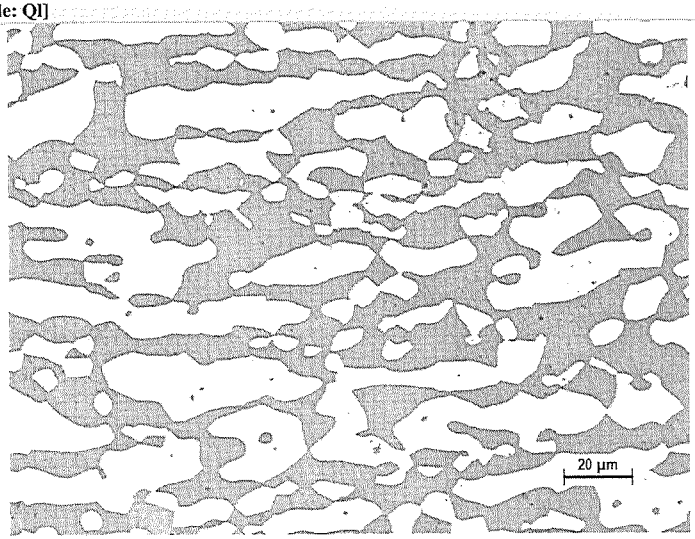
Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		426/23	56144	ASTM A 815-23 UNS S32760

ESAME MICROGRAFICO/ Micrographic examination [Decision rule: QI]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
6647	ASTM E3 – 11(R2017) + ASTM E407 – 07 (R2015)e1	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	24/01/2024

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	20% NaOH	Specimen in Base Material 3.5 x 20.0 = 70.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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19/01/2024				
Data Rapporto di prova/ Test Report Date 26/01/2024	Antonielli Stefano	Amani Paolo		

firmato elettronicamente/electronically signed

DECISION RULE:
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- QS → Semi-quantitative
- QN → Quantitative (Implicit Uncertainty)
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Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 10045A024 - Qty:2,00
Customer: ROSETTI MARINO S.p.A.
Description: RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS REC0SD08001H01
Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948
Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY * Issued 09-10-2024

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RAPPORTO DI PROVA/ TEST REPORT

A923A 1216 / 24

Rif. Lab SIM (FCP) : **419 / 24 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN DICEMBRE 2023/1**

Commessa/ Job **30012/23 23/1099**

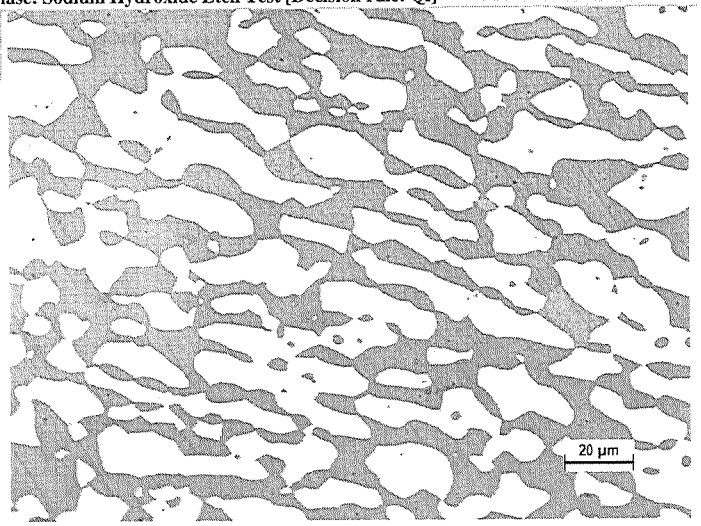
Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		**426/23**	**56144**	**ASTM A 815-23 UNS S32760**

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio/ Detecting Detrimental Intermetallic Phase: Sodium Hydroxide Etch Test [Decision rule: QI]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
6651	ASTM A923 – 22 Method A	**RTX_D53 Rev.9 + STATOIL -2010080 Rev.0**	B T FT	24/01/2024

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata/ Examined area
500 X	40g NaOH to 100g distilled water	Specimen in Base Material



Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure.

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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19/01/2024				
Data Rapporto di prova/ Test Report Date: **26/01/2024**	*Antonielli Stefano*	*Amani Paolo*		

firmato elettronicamente/electronically signed

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Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

Customer: ROSETTI MARINO S.p.A.
Description: REC05D08001H01 RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS
raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2.00
Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948
Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
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RAPPORTO DI PROVA/ TEST REPORT

A923C 1216 / 24

Rif. Lab SIM (FCP) : **419 / 24 (A / A)**

LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN DICEMBRE 2023/1**

Commessa/ Job **30012/23 23/1099**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		426/23	56144	**ASTM A 815-23 UNS S32760**

Individuazione di fasi intermetalliche dannose: Prova di corrosione per "pitting" in cloruro ferrico/ Detecting Detrimental Intermetallic Phase: Ferric Chloride Pitting Corrosion Test [Decision rule: Qs]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Dimensioni/ Dimension Lunghezza/ Length	Larghezza/ Width	mm Spessore/ Thickness	Area/ Area cm²
6650	ASTM A923 – 22 Method C	RTX_D53 Rev.9	B L FT	Meccanica/ Mechanical	49,86	29,08	3,58	34,65

Condizioni superficiali/ Surface condition	Lavorato/ Machined	
Temperatura di prova/ Test temperature (°C)	50	
Temperatura Minima Rilevata/ Minimum temperature observed (°C)		49,86
Temperatura Massima Rilevata/ Maximum temperature observed (°C)		50,48
Tempo di esposizione (ore)/ Exposure time (hours)	24	

Data inizio/ Initial date	Data fine/ End date
24/01/2024 14:48:29	25/01/2024 14:48:29

Soluzione/ Solution FeCl3 6% SOLUTION

Peso iniziale/ Initial weight (g)	39,9407	
Peso finale/ Final weight (g)	39,9401	
Perdita di peso/ Weigth loss (g)	0,0006	
Perdita di massa/ Specimen mass loss	0.2	(g/m²)

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X/
NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Velocità di corrosione/ Corrosion speed	(mg/(dm²*d))	**1,7**
Limite velocità di corrosione (mg/(dm²*d)) max/ Corrosion rate limit (mg/(dm²*d)) max		**10.0**

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival	19/01/2024	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
Data Rapporto di prova/ Test Report Date	26/01/2024 firmato elettronicamente/electronically signed	Antonielli Stefano	Amani Paolo		

DECISION RULE:
• QL → Qualitative
• Qs → Semi-quantitative
• Qn → Quantitative (Implicit Uncertainty)
• Qi → Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.
The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2,00

Description: RECOSD08001H01
RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000003948

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

PM 1216 / 24

Rif. Lab SIM (FCP) : **419 / 24 (A / A)**

LAB N° 0864 L

Cliente/ Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/ Order **MASTER PLAN DICEMBRE 2023/1**

Commessa/ Job **30012/23 23/1099**

Campione fornito da cliente/ Sample supplied by customer :

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
SACRIFICAL PIECE 1.1/2" W.T. 3.68 mm	1		426/23	56144	ASTM A 815-23 UNS S32760

PROVA DI TRAZIONE A TEMPERATURA AMBIENTE/ Tensile test at room temperature [Decision rule: Qn]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Dimensioni/ Dimension Wth mm	Ø / Width mm	ØPipe mm	Lo (mm)	Posizione di prelievo/ Test position	Temp./ Temp. °C	Snervamento/ Yield strength MPa		MPa	Rottura/ Tensile strength Rm MPa		Allungamento/ Elongation after fracture A (%)		Strizione/ Area Reduction Z (%)	S/R/ Ratio Yield strength / Tensile strength	Data esecuzione/ Date of Testing
6642	ASTM A370 – 23 §6÷14, § A1.3, § A2.2 and § A3.2	**Material Standard**	3,74	12,49		50,00	B L FT	23,0	(≥550)	ReH	**628**	(≥750)	**881**	(≥25)	**29,3**			26/01/2024

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival **19/01/2024**

Data Rapporto di prova/ Test Report Date **26/01/2024**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/ Inspector

Cliente/ Customer

DECISION RULE:
- Ql — Qualitative
- Qs — Semi-quantitative
- Qn — Quantitative (Implicit Uncertainty)
- Qi — Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.

The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

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INSPECTION CERTIFICATE
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Number: 705701 Page: 1 / 6	Rev: 00
Created on: Date: 04.09.2019	Modified on: 09.09.2019

TTI - TUBACEX TUBOS INOXIDABLES
Registro Mercantil de Alava, Tomo 587, Folio 189, Hoja VI 2885 - N.I.F. A-01140227
Tres cruces, 8
01400 Llodio (Alava)
SPAIN
TL: 946721350
FAX: 946725062
E-MAIL:

203809

REVIEWED

CUSTOMER DESCRIPTION/DESCRIPCIÓN DEL CLIENTE/KUNDENBEZEICHNUNG/COMMETTANT

CLIENT SOLD TO/SOLICITANTE/AUFTRAGGEBER/COMMETTANT
TSS
TUBACEX SERVICE SOLUTIONS, S.A.U
POLIGONO INDUSTRIAL SARATXO
01470 AMURRIO

SOLD TO:RACCORTUBI S.P.A.
SOLD P.O. REF.:OS000008 S
SOLD ORDER REF.:332477
COPY NUMBER: 001

CLIENT ORDER/PEDIDO CLIENTE/KUNDEN AUFTRAGSNUMMER/NO.DE COMMANDE: I006119
SALES ORDER/PEDIDO VENTAS/AUFTRAGSNUMMER/NO.DE COMMANDE D'USINE:

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AENOR Gestión Ambiental UNE EN ISO 14001

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order#s requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

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INGENIERIA DE CALIDAD
Iñigo Arriola Aloibar

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: REC0SD08001H01
RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

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Number: 705701 Page: 2 / 6	Rev: 00
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MATERIAL: SEAML. STAINL. STEEL TUBES/PIPES/TUBOS INOXIDABLES SIN SOLDADURA/TUBES INOX SANS SOUDURE/NAHTLOSE EDELSTAHLROHRE
HEAT-TREATED, PICKLED / TRATADO, DECAPADO / HYPERTREMPE, DECAPE / WÄRMEBEHANDELT, GEBEIZT, PASSIVATED / PASIVADO / PASSIVÉ / PASSIVIERT
GRADE / ACERO / GRADE / WERKSTOFF: S32760,1.4501,
STANDARD / NORMA / STANDARD / LIEFERUNG NACH: ASME SECT.II PART.A SA790/SA790M-2017 ED.
ASTM A790/A790M-18
EN 10216-5:2013 TC2
EN 10297-2:2005
NORSOK M650 QTR NO.2
NORSOK M630 REV.6 MDS D51 REV.5
CHECK ANALYSIS
CORROSION TESTED ACC. TO ASTM A262 PRACTICE E
CORROSION TESTED ACC. TO ASTM A923 TEST METHOD C
CORROSION TESTED ACC. TO ASTM G48 TEST METHOD A
CORROSION TESTED ACC. TO EN ISO 3651-2 PRACTICE B
SHELL ES/247 REV.2 EXCEPT DPI (TABLE 1) AND SURFACE REQUIREMENTS (POINT 9.1)
HYDROTEST
ANSI/NACE MR0103/ISO 17945:2015
ANSI/NACE MR0175/ISO15156-3:2015
QAD 68 REV.0
RTX_D51S REV.4
SHELL MESC SPE 74/014 FEBRUARY 2017 EXCEPT:
NO LIQUID PENETRANT TEST (POINT 14.12.1),
TENSILE TEST ONLY IN LONGITUDINAL DIRECTION.
ULTRASONIC TEST ONLY FOR LONGITUDINAL DEFECTS.
IMPACT TEST (if applicable): Lateral expansion 0.38 mm. minimum.
ULTRASONIC TEST ACC. TO ASTM A999/A999M / ASTM E213
TOLERANCES / TOLERANCIAS / TOLERANCES / TOLERANZEN NACH: ASME SECT.II PART.A SA999/SA999M-2017 ED.
ASTM A999/A999M-18
EN ISO 1127/03.97 D3/T3
RANDOM LENGTHS / LARGOS VARIABLES / LONGUEUR COURANTE / EINGEENGTE LÄNGE 5.000/7.000 MM
PLAIN ENDS / LISOS / EXTRÉMITÉ D'EQUERRE / GLATTE ENDEN,
DIMENSIONS/DIMENSIONES/DIMENSIONS/DIMENSIONS: 48,26 X 3,68 MM - 1.1/2" SCH 40S
COLD FINISHED/LAMINADOS EN FRIO/KALTGEFORMT/LAMINES A FROID

Sales Item / Pos Ped. / AuftrgPos / Usine Pos	Client Item / Pos Clnt / Kunde Pos / Com. Pos	Delivery No / Nº Entrega / Lieferung / Avis. d'exp	Lot No. / Nº lote / Los Nr. / Lot d'inspection	Heat No / Colada / Schmelze / Coulée	Pieces / Piezas / Stück / Pcs	Weight / Peso / Gewicht / Poids	Tot Lgth / Long. Tot / Gesamtlänge / Tolength	Un Lgth / Long. Un / Längentyp / Long. Un
10		8110064672	P1904210	56144	16	392 KG	96,32 M	5000-7000 MM

RAW MATERIAL/DATOS MATERIAL/VORMATERIAL/MATIERE PREMIERE

Heat Nr:	Supplier	Method
56144	ACERALAVA (SPAIN)	Electric furnace+AOD

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AENOR Gestión Ambiental UNE EN ISO 14001

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Iñigo Arriola Aloibar

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: REC0SD08001H01
RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
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Number: 705701 Page: 3 / 6	Rev: 00
Created on: Date: 04.09.2019	Modified on: 09.09.2019

CHEMICAL COMPOSITION (%)/COMPOSICIÓN QUÍMICA (%)/CHEMISCHE ZUSAMMENSETZUNG (%)/COMPOSITION CHIMIQUE(%)

*L: Ladle C:Products

*	Heat	Seq	C	Mn	Si	P	S	Ni	Cr	Mo	Al	Cu
L	56144	1	0,013	0,67	0,260	0,020	0,0004	6,95	25,55	3,65	0,011	0,62
C	56144	10	0,013	0,63	0,270	0,019	0,0004	6,70	25,40	3,67	0,013	0,64
C	56144	11	0,013	0,63	0,270	0,019	0,0004	6,70	25,40	3,67	0,013	0,64

*	Heat	Seq	V	Nb	W	Co	N	Pren
L	56144	1	0,049	0,002	0,630	0,045	0,2540	41,6590
C	56144	10	0,049	0,002	0,620	0,045	0,2540	41,5750
C	56144	11	0,049	0,002	0,620	0,045	0,2450	41,4310

HEAT TREATMENT/TRATAMIENTO TÉRMICO/WÄRMEBEHANDLUNG/TRAITEMENT THERMIQUE

HIPERTEMPLADOS A 1100 °C , 5 min , Agua
SOLUTION ANNEALED AT 1100 °C , 5 min , WATER
HYPERTREMPES 1100 °C , 5 min , L' EAU
LOESUNGSGEGLUEHT 1100 °C , 5 min , Wasser

TENSILE TEST/TEST DE TENSIÓN/ESSAI TRACTION/ZUGVERSUCH

Lot No.	Sample	T	Rp0.2	Rp1.0	Rm	A2"	A5	Type	Spc.Type	Spc.Dim
		°C	MPa	MPa	MPa	%	%			mm
P1904210	1	20	691	792	903	36	36	L	S	19,96
	2	20	663	754	876	35	35	L	S	20,09

HARDNESS TEST/TEST DE DUREZA/DUREE/HÄRTEPRÜFUNG

Lot No.	Sample	HRC1	HRC2
P1904210	1	17,4	17,5

CORROSION ACCORDING TO ASTM A923 C/CORROSION DE ACUERDO ASTM A923 C/CORROSION SUIVANT ASTM A923 C/CORROSION ACCORDING TO ASTM A923 C

Lot No.	Sample	T	Pits-20x	Wloss	time
		°C		MDD	Horas
P1904210	1	50	N	0,0000	24,0

Corrosion test ASTM G48 practice A/Corrosión ASTM G48 práctica A/TEST DE CORROSION ASTM G48 practice A/LOCHFRASSTEST ASTM G 48 PR.A

Lot No.	Sample	T	Pits-20x	W.loss	time
		°C		g/m2	Horas
P1904210	1	50	N	0,0000	24,0

FERRITE ACCORDING TO ASTM E 562/Contenido de Ferrita según ASTM E562/FERRITE SUIVANT ASTM E562/FERRIT ENTSPRECHEND ASTM E562

Lot No.	Sample	%Fer	Dev.Ferr
		%	%
P1904210	1	54,65	1,97

METALURGICAL TESTS/ENSAYOS METALÚRGICOS/METALLURGISCHE PRÜFUNGEN/ESSAIS METALLURGIQUES

ETCH STRUCTURE ACC. ASTM A923 MET.A: UNAFFECTED STRUCTURE. MATERIAL FREE FROM INTERMETALLIC PHASES AND PRECIPITATES. UNIFORM STRUCTURE ACROSS

AENOR ER Empresa Registrada UNE EN ISO 9001

AENOR Gestión Ambiental UNE EN ISO 14001

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INGENIERIA DE CALIDAD

Iñigo Arriola Aloibar

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Number: 705701 Page: 4 / 6	Rev: 00
Created on: Date: 04.09.2019	Modified on: 09.09.2019

FULL WALL THICKNESS
EXAMEN DE MICROESTRUCUTRA DE ACUERDO A ASTM A923 MET.A: ESTRUCTURA NO AFECTADA. MATERIAL LIBRE DE FASES INTERMETALICAS Y PRECIPITADOS. ESTRUCTURA UNIFORME A TRAVES DEL ESPESOR.
ETCH STRUCTURE ACC. ASTM A923 MET.A: UNAFFECTED STRUCTURE. MATERIAL FREE FROM INTERMETALLIC PHASES AND PRECIPITATES. UNIFORM STRUCTURE ACROSS FULL WALL THICKNESS

INTERGRANULAR CORROSION TEST ACC. TO ASTM A262 PRACT."E": SATISFACTORY
ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ASTM A262 PRACT.E: SATISFACTORIO
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND ASTM A262 PRACT.E: IN ORDNUNG
ESSAI DE CORR. INTERGR. SELON ASTM A262 PRACT.E:SATISFAISANT
INTERGRANULAR CORROSION TEST ACC.TO DIN EN ISO 3651-2 MET.B: SATISFACTORY
ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ISO 3651-2 MET.B: SATISFACTORIO
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND ISO 3651-2 MET."B": IN ORDNUNG
ESSAI DE CORR. INTERGR. SELON ASTM ISO 3651-2 MET."B":SATISFAISANT

NON-DESTRUCTIVE TESTS/ENSAYOS NO DESTRUCTIVOS/ZERSTÖRUNGSFREIE PRÜFUNGEN/ESSAIS NON DESTRUCTIFS
FERRITE CONTENT DETERMINED BY FISCHER FERRITOSCOPE TO 100% OF PRODUCTS TO BE BETWEEN 35% - 55% FERRITE CONTENT

CONTENIDO EN FERRITA MEDIDO CON FERRITOSCOPIO SOBRE EL 100% DE LOS TUBOS, CONTENIDO EN FERRITA COMPRENDIDO ENTRE 35% - 55%.

100% ULTRASONIC TEST ACC. TO ASTM A999 / E213: SATISFACTORY
100% ENSAYO DE ULTRASONIDOS DE ACUERDO A ASTM A999 / E213: SATISFACTORIO
100% ULTRASCHALLPRÜFUNG NACH ASTM A999 / E.213:IN ORDNUNG
100% ESSAI D´ULTRASON D'ACCORD A ASTM A999 / E.213: SATISFAISANTE
POSITIVE MATERIAL IDENTIFICATION TEST ON EACH TUBE/PIPE BY "X-RAY-FLUORESCENCE-ANALYZER": SATISFACTORY
VERIFICACION DEL GRADO DE ACERO EN CADA TUBO MEDIANTE "ANALIZADOR DE FLUORESCENCIA DE RAYOS X": SATISFACTORIO
VERWECHSLUNGSPRUEFUNG AN JEDEM ROHR MIT "RÖNTGEN-FLUORESZENZ-ANALYSATOR": IN ORDNUNG
VERIFICATION DE LA NUANCE SUR CHAQUE TUBE PAR "X-RAY-FLUORESCENCE-ANALYZER": SATISFAISANT

HYDROSTATIC PRESSURE TESTED AT 170 bar, 2500 PSI DURING 5 SEC ON EACH TUBE/PIPE: SATISFACTORY
ENSAYO HIDROSTÁTICO A 170 bar, 2500 PSI DURANTE 5 SEC EN CADA TUBO:

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AENOR Gestión Ambiental UNE EN ISO 14001

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Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: REC0SD08001H01
RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2,00
Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

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Number: 705701 Page: 5 / 6	Rev: 00
Created on: Date: 04.09.2019	Modified on: 09.09.2019

SATISFACTORIO
WASSERDRUCKPRÜFUNG BEI 170 bar, 2500 PSI HALTEZEIT 5 SEC JE ROHR: IN ORDNUNG
ESSAI DE PRESSION HYDROSTATIQUE À 170 bar, 2500 PSI PENDANT 5 SEC SUR CHAQUE TUBE: SATISFAISANT
100% EDDY CURRENT TEST AT ASTM E426: SATISFACTORY
100% ENSAYO DE CORRIENTES INDUCIDAS DE ACUERDO A ASTM E426: SATISFACTORIO
100% WIRBELSTROM PRUEFUNG NACH ASTM E426: O.B.
100% CONTROLE COURANTS FOUCAULT D'APRES ASTM E426: BIEN
100% EDDY CURRENT TEST AT DIN EN 10246-2: SATISFACTORY
100% ENSAYO DE CORRIENTES INDUCIDAS DE ACUERDO A DIN EN 10246-2: SATISFACTORIO
100% WIRBELSTROM PRUEFUNG NACH DIN EN 10246-2: O.B.
100% CONTROLE COURANTS FOUCAULT D'APRES DIN EN 10246-2: BIEN

DIMENSIONAL CHECKING ON EACH TUBE: SATISFACTORY
INSPECCION DIMENSIONAL AL 100% DE LOS TUBOS SATISFACTORIA
100% MASSKONTROLLE: O.B.
VERIFICATION DIMENTIONNELLE AU 100% DES TUBES, SATISFAISANTE

VISUAL INSPECTION ON EACH TUBE: SATISFACTORY
INSPECCION VISUAL AL 100% DE LOS TUBOS, SATISFACTORIA
100% BESIGCHTIGUNG: O.B.
EXAMEN VISUEL AU 100% DES TUBES, SATISFAISANT

TECHNOLOGICAL TESTS/ENSAYOS TECNOLÓGICOS/TECHNOLOGISCHE PRÜFUNGEN/TECHNOLOGICAL TESTS

FLARING TEST: SATISFACTORY
ABOCARDADO S.NORMA: SATISFACTORIO
AUFWEITVERSUCH: IN ORDNUNG
ESSAI D'EVASEMENT: SATISFAISANT

FLATTENING TEST: SATISFACTORY
APLASTADO S.NORMA: SATISFACTORIO
RINGFALTVERSUCH: IN ORDNUNG
ESSAI D'APLATISSEMENT: SATISFAISANT

MARKING/ETIQUETADO/KENNZEICHNUNG/MARKSTEXT

TX2 TX1 TUBACEX 48,26 X 3,68 MM - 1.1/2" SCH 40S ASME SA790 ASTM A790 EN 10216-5 TC2 EN 10297-2 S32760 1.4501 CFD CD SMLS HEAT/ PMI-AV LOT NO/ MADE IN SPAIN

REMARKS/OBSERVACIONES/ANMERKUNG/REMARQUES

AENOR Empresa Registrada UNE EN ISO 9001

AENOR Gestión Ambiental UNE EN ISO 14001

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies orders requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

Iñigo Arriola Alcibar

TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate. TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: REC0SD08001H01
RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS

raccortubi

Heat num. or Pcs. marking: 1004SA024 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

TTI
TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RECEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 705701 Page: 6 / 6	Rev: 00
Created on: Date: 04.09.2019	Modified on: 09.09.2019

REMARKS/OBSERVACIONES/ANMERKUNG/REMARQUES

NO MERCURY, MERCURY COMPOUNDS OR MERCURY BEARING INSTRUMENTS AND/OR EQUIPMENT HAVE BEEN USED ALONG MANUFACTURING AND INSPECTION PROCESS.
DURANTE LOS PROCESOS DE FABRICACIÓN E INSPECCIÓN NO SE HA USADO MERCURIO NI INSTRUMENTOS Y/O EQUIPOS CONTENIENDO MERCURIO O CON COMPONENTES DE MERCURIO.
KEINE QUEKSILBER, BZW. QUECKSILBERVERUNREINIGTES KOMPONENTEN ODER KUGELLAGERINSTRUMENTE UND/ODER GERÄTE SIND BENUTZT WORDEN PRODUKTIONS UND BESICHTIGUNGSPROZESS.
IL N'A PAS ÉTÉ FAIT USAGE DE MERCURE, DE COMPOSÉS CONTENANT DU MERCURE OU DE MATÉRIAUX ET/OU D'INSTRUMENT CONTENANT DU MERCURE TOUT AU LONG DES ÉTAPES DE FABRICATION ET DU PROCESSUS D'INSPECTION ET DE CONTRÔLE.

NO WELDING OR WELD REPAIRS WERE MADE
SIN REPARACION POR SOLDADURA
KEINE SCHWEISSBEARBEITUNG WURDE VORGENOMMEN
SANS RÉPARATION AVEC SOUDURE
MATERIAL MANUFACTURER APPROVED BY TÜV SÜD Industrie Service GmbH
(NOTIFIED BODY 036)TO ISSUE CERTIFICATES OF SPECIFIC PRODUCT CONTROL IN
ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU ANNEX 1 POINT 4.3.
FABRICANTE DE MATERIALES APROBADO POR TÜV SÜD Industrie Service GmbH (ORGANISMO NOTIFICADO 0036) PARA LA EMISION DE CERTIFICADOS ESPECIFICOS DE CONTROL DE PRODUCTO DE ACUERDO AL ANEXO 1, PUNTO 4.3 DE LA DIRECTIVADE EQUIPOS A PRESION 2014/68/EU.
WERKSTOFFHERSTELLER MIT BERECHTIUNG ZUR AUSSTELLUNG VON BESCHEINIGUNGEN ÜBER SPEZIFISCHE PRÜFUNGEN AN DEN WERKSTOFFEN IM GELTUNGSBEREICH DER ZERTIFIZIERUNG UND IN ÜBEREINSTINSTIMMUNG MIT DER DRUCKGERÄTERICHTLINIE 2014/68/EU UND DEN ZUGRUNDE LIEGENDEN SPEZIFIKATIONEN ENTSPR. DER BENANNTEN STELLE NR.0036, TÜV SÜD Industrie Service GmbH
PRODUCTEUR DU MATERIEL APPROUVE PAR TÜV SÜD Industrie Service GmbH N.B. 0036) POUR EMISSION DES CERTIFICATS SPECIFIQUE DE CONTROLE DE PRODUIT SELON LA DIRECTIVE DES EQUIPES A PRESION 2014/68/EU ANNEXE 1 POINT 4.3.

MATERIAL CHARACTERISTICS COMPLY WITH POINT 7.5 OF ANNEX I TO PED BY HAVING AN ELONGATION AFTER RUPTURE AT TENSILE TEST NO LESS THAN 14% AND A BENDING RUPTURE ENERGY AT IMPACT TEST NO LESS THAN 27J AT 20°C.
LAS CARACTERISTICAS DEL MATERIAL CUMPLEN CON LOS REQUISITOS DEL PUNTO 7.5 DE LA DIRECTIVA PED POR TENER UN ALARGAMIENTO TRAS ROTURA EN EL ENSAYO DE TRACCION NO INFERIOR AL 14% Y PO DE TRACCION NO INFERIOR AL 14% Y POR TENER UNA RESISTENCIA AL IMPACTO NO INFERIOR A 27 J A 20° C.
DIE WERKSTOFF-WERTE ENTSPRECHEN PUNKT 7.5. DER DGRL, ANHANG I, MIT EINERBRUCHDEHNUNG = 14% IM NORMGEMÄSS DURCHGEFÜHRTEN ZUGVERSUCH UND DER KERBSCHLAGARBEIT = 27J AN EINER ISO - v PRO PROBE BEI EINER TEMPERATUR VON HÖCHSTENS 20°C
LES CARACTERISTIQUES DU MATERIEL, AYANT UN ALLONGEMENT APRES RUPTURE A L'ESSAI DE TRACTION NON INFERIEUR DU 14% ET UNE RESISTENCE A LA FLEXION PAR CHOC A 20°C NON INFERIEUR A 27J, SONT CONFORMES AUX PRESCIPTIONS DU PONT 7.5 DE L'ANNEXE I DE PED.

MATERIAL IS FREE OF RADIATION CONTAMINATION
EL MATERIAL ESTA LIBRE DE CONTAMINACION POR RADIACIONES
MATERIAL IS FREI VON RADIOAKTIVITÄT
MATÉRIEL LIBRE DE POLUTION RADIOACTIVE

AENOR ER Empresa Registrada UNE EN ISO 9001

AENOR Gestión Ambiental UNE EN ISO 14001

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TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

Iñigo Arriola Aloibar

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: REC0SD08001H01
RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

TTI
TUBACEX GROUP

INSPECTION CERTIFICATE
EN 10204 3.1
Annex 1
Microphotographs

Number	:	705701
Page	:	1/2
Date	:	09/09/2019

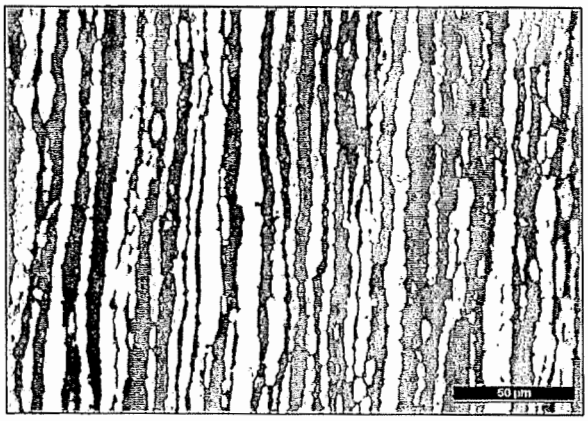
TTI - TUBACEX TUBOS INOXIDABLES, S.A.U.

Registro Mercantil de Alava, Tomo 587, Folio 189, Hoja VI2885 - N.I.F. A-01140227
Tres Cruces, 8
01400 Llodio (Álava)
SPAIN

Sales Order : I006119
Sales Item : 10

Standard : ASTM A790
Grade : UNS S32760
Dimensions : 1.1/2"SCH 40

Microstructure: MATERIAL FREE FROM INTERMETALLIC PHASES AND PRECIPITATES. UNIFORM STRUCTURE ACROSS FULL WALL THICKNESS



904210 I006119-10 Y I006198-30 C-56144 LONG 500X.

AENOR ER Empresa Registrada
AENOR Gestión Ambiental

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TUBACEX TUBOS INOXIDABLES
INGENIERIA DE CALIDAD

Iñigo Arriola Aloibar

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: REC0SD08001H01
RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFICATE COPY
* Issued 09-10-2024

TTI
TUBACEX GROUP

INSPECTION CERTIFICATE
EN 10204 3.1
Annex 1
Microphotographs

Number	:	705701
Page	:	2/2
Date	:	09/09/2019

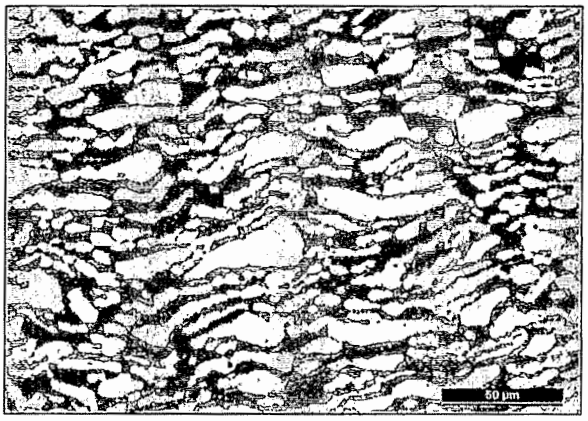
TTI - TUBACEX TUBOS INOXIDABLES, S.A.U.

Registro Mercantil de Alava, Tomo 587, Folio 189, Hoja VI2885 - N.I.F. A-01140227
Tres Cruces, 8
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Sales Order : I006119
Sales Item : 10

Standard : ASTM A790
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Dimensions : 1.1/2"SCH 40

Microstructure: MATERIAL FREE FROM INTERMETALLIC PHASES AND PRECIPITATES. UNIFORM STRUCTURE ACROSS FULL WALL THICKNESS



904210 I006119-10 Y I006198-30 C-56144 TRANS 500X

AENOR ER Empresa Registrada
AENOR GA Gestión Ambiental

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies ordering requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

TUBACEX TUBOS INOXIDABLES
INGENIERIA DE CALIDAD
Iñigo Arriola Alcibar

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 120 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: REC0SD08001H01
RID. CONC. 1.1/2"x1" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1004SA024 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

Inspection Certificate
EN 10204-2004 3.1

Document no.	8055-P2	19/09/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00006433	

	Item	Quantity	Heat id.
2	TEE 1.1/2" XS WPL6	1,00	0D-0D1533

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	TEE COLD FORMED, THEN HEAT TREATED AND MAGNETIC PARTICLE EXAMINATED ACCORDING ASTM E709
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Al%	N%	Ti%	Nb%
0,110	1,280	0,290	0,009	0,004	0,020	0,120	0,020	0,020	0,001	0,012	0,0020	0,0020	0,0010

CE_{IIW} 0,35

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	325	520	34

Impact Test

Direction L **Test Temperature** -46 °C **Test Type** KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
5 X 10	0,4	Base Mat.	55	61	58	58

Hardness Test

Base Metal **Avg** 140 HBW

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature
This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 260 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: TEE0CS05251H00
TEE UG. 1.1/2" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 0D - Qty:1,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

qualytube

EITI S.r.l. - Qualytube Division
Via Pietro Palmieri 29, 10138 Torino
Via Enrico Berlinguer 4, 20060 Pozzo d'Adda (MI)

EITI - The Inspection Body

MagneticTest Report

Test Report
Rapporto di Prova
Prüfbericht
Rapport d'essai

Report No. - Rapporto N°
Berichten Nr. - Rapport N° : MT24033

Date - Data - Vom - date : 20/09/2024

Customer - Cliente - Besteller - Acheteur 1)
RACCORTUBI

Customer - Cliente - Besteller - Acheteur 2)

Order No. - Ordine N° - Bestell-Nr. - Commande N°
No. 82

Performed Test
100% MAGNETIC TEST ON ACCESSIBLE SURFACE

Material Description- Descrizione del Materiale
Gegenstand - Dèsignation du Produit
see table below

Test	Electromagnetic joke
Particles type	fluorescent
Joke	AC - Magnafulx
Calibration block	ASME 4,5 Kg

According to	EN 10246-12 ASTM E709 - ASME VIII Division 1 App.6/8
According to	ASTM SA960 SUPPLEMENTARY S53
Particles Description	MG ICRI G182 batch. No. 2015 04 H2
Inspection conditions	BLACK UV LIGHT - 1000 µW/cm2 min.
Pie gauge	ASME

Result - Esito
Ergebnis - Résultat
SATISFACTORY
NO REPORTABLE INDICATIONS HAVE BEEN FOUND

ITEM	DIAMETER (NPS) THICKNESS (mm)	STANDARD / GRADE	HEAT	No.		NOTE
1	1.1/2" sch. XS	CAPS ASME/ASTM SA/A 420 WPL6	16I-16I2373	1		
5	4"x1.1/2" STD/XS	RID. ECC. ASME/ASTM SA/A 420 WPL6	513131	1		
2	1.1/2" XS	TEE UG. ASME/ASTM SA/A 420 WPL6	0D-0D1533	1		
3	1.1/2"x3/4" XS	TEE RID. ASME/ASTM SA/A 420 WPL6	14E-14E5482-J5L3682	1		
4	1.1/2"x1" XS	TEE RID. ASME/ASTM SA/A 420 WPL6	54-J9KA054	3		

issued by **Verified by** **Customer**

Qualytube
Nicolò Turani - NDT Specialist
ISO 9712 [illegible] 10246/PND/C Level 2-UT
ISO 9712 CICPND 27059/PND/C Level 2 PT
ISO 9712 CICPND 28229/PND/C Level 2 MT

EITI - European Institute of Technical Inspections
Dario Pasqualini
Technical Director
ISO 9712 Level 3 – UT/PT/VT/RT

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 260 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: TEE0CS05251H00
TEE UG. 1.1/2" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 0D - Qty:1,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

raccortubi

Customer: ROSETTI MARINO S.p.A.

Description: TEE0SD02931H00
TEE UG. 1.1/2" SCH.40/S SEAMLESS

Heat num. or Pcs. marking: 1157SA019 - Qty:2,00

Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

tecninox

Stab. / Plant.: Via Don Spagnoli 5 - 29010 Sarmato (PC) - ITALIA
tel. (+39) 0523.887452 - fax. (+39) 0523.887687

Sede Operativa / Commercial Office:
RACCORTUBI S.p.A. - Viale De Gasperi, 194
20010 - Marcallo con Casone (MI) - ITALIA
tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it

Certificato di collaudo d'officina tipo: EN 10204 3.1
Product test certificate Type: EN 10204 3.1
Certificat de Reception Type: EN 10204 3.1

Cliente RACCORTUBI S.p.A.
Customer/

Ordine N. OF005236 del 19/02/19
P.O.N./C.N.

Pos. N. 23 **Q.tà** 58
Item/Poste Q.ty/Q.té

(*) Marcatura e cert. N. 1157SA019 Created on: 30-08-2019
Material Marking e Cert. N.

Descrizione EQ. TEES 1.1/2" SCH.40/S
Description
Description

Specifica BW FITTINGS TO ASTM A/815M-14e1
Specification ASME SA/815M ed.17 UNS S32760
Spécification DIMS/ENDS ANSI ASME B16.9-ed.2018 B16.25-ed.2017

Materiale base - Fabbricante: TUBACEX Cert. No.: 648100
Raw material - manufacturer/Materiel du depart - fabriquant: SMLS PIPES TO ASTM A-790 UNS S32760
TUBACEX Cert. No.: 648100

Test produzione
Production test/Coupon de production

Caratteristiche meccaniche
Mechanical Properties/Caracteristiques Mechaniques

Test results from sacrificial fitting or representative pipe ring according to approved M-650 QTRS	**Colata N.** Heat N. Couléè N.	**N. prova** Specimen N. Echantil. N.	**Snervamento** Yield strength Limite d'elasticité N/mm2	**Rottura** Tensile Resistance à la traction N/mm2	**Allungam. %** Elongation Allongement 2"	**Durezza** Hardness as per NACE MRO1-75	**Durezza** Hardnes Dureté	**Resilienza** Impact energy Resilience **Joules**
QTR: 01/SDSS/A Rev.4 Specimens location drawing as per relevant QTR	49329	495/19	642	881	35.3	HRC<28	HRC 24	

Analisi chimica %
Chemical composition/Composition chimique

Colata N. Heat N. Couléè N.	**C**	**Si**	**Mn**	**P**	**S**	**Cr**	**Ni**	**Mo**	**Cu**	**W**	**N**			**PRE**	**FERRITE**
49329	0,014	0,460	0,69	0,020	0,0004	25,55	6,95	3,62	0,66	0,62	0,268			41.784	47.3

Prove
Tests/Tests

Altri G-48 MET.A
Others
Autres

I dati dell'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove.
The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests.
L'analyse chimique et les caracteristique mécaniques sont en conformité au certificat émis par le producteur du materiel de base et/ou par le laboratoire qui a ecsécuté les tests.

Responsabile Controllo Qualità

Quality Control Manager

Note/Remarks/Notes

MATERIAL CONFORMS TO NACE MR0175/ISO 15156 & MR0103 CURRENT EDITION
CERTIFIED ACC.TO PED 2014/68/UE annex I para 4.3
- LIQUID PENETRANT EXAMINATION ACCORDING TO ASME VIII Div 1 App 8 ON 10% OF FITTINGS: SATISFACTORY
- FITTINGS CAN SATISFACTORILY PASS THE INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A 262 Pr E
- FOR SPECIAL TEST SEE SIDER TEST CERTIFICATES N.:19752/19
- MATERIAL AND TESTS ACCORDING TO M-630 REV.6 - MDS D53 REV.5
- 100% OF THE FITTINGS HAVE BEEN MEASURED BY FISCHER FERITOSCOPE MP30 FOR FERRITE CONTENT WITH RESULTS WITHIN 35%-55% (AND 35%-65% ON WELD BEAD).

ALL FITTINGS HAVE BEEN SUPPLIED IN PICKLED AND PASSIVATED CONDITIONS
(*) Material marked with certificate number as per relevant code.

Costruzione
Manufacture/Méthode de fabrication
Formato a freddo Cold formed Formés à froid
Senza saldatura Seamless Sans soudure

Ispezione
Inspection/inspéction
Esame visivo e dimensionale: Soddisfacente
Identificazione materiale: 100% soddisfacente

Visual and dimensional test: Satisfactory
Positive Material Identification: 100% satisfactory

Examen visuel et dimensionel: Satisfaisant
Analyse de controle du produit: 100% satisfaisant

Trattamento termico
Heat treatment/Traitement Thermique
Solubilizzazione a 1130°C

Solution Annealing at 1130°C , water quenching

Hypertrempés à 1130°C

Heat treatment soaking time for 30 minutes, batch n.0313

Guaranteed caracteristics (A.M. du 24.03.78)
Caracteristiques garanties pour Z2CN18-10 et Z2CND17-13
C <= 0.25% Rm <= 760 N/mm2
S <= 0.05% Rm(A-2) <= 10500 N/mm2
P <= 0.05% A% sur 5,65 sqrt(So) >= 16

Il materiale è stato fornito in conformità ai requisiti dell'ordine.
The material has been furnished in accordance with purchase order requirements.
Le materiel a eté trouvé conforme aux exigences.

Marchio di fabbrica
Trade Mark

Ispettore
Inspector/Inspecteur

Customer: ROSETTI MARINO S.p.A.

Description: TEE0SD02931H00
TEE UG. 1.1/2" SCH.40/S SEAMLESS

Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

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RAPPORTO DI PROVA/TEST REPORT

G48ACE 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		495/19	49329	ASTM A 815-18 UNS S32760

Prova di "pitting" in ferro-cloruro/ Ferric chloride pitting test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Lunghezza/ Length mm	Larghezza/ Width mm	Spessore/ Thickness mm	Area/ Area cm²	
105408	ASTM G 48-11(2015) - Met. A	**RTX_D53 Rev.7**	B L FT	Meccanica/ Mechanical	50,77	25,49	5,09	33,65	[(LxWx2)+(WxTx2)+(LxTx2)] / 100

Temperatura di prova (°C)/ Test temperature (°C) 50

Tempo di esposizione (ore)/ Exposure time (hours) 24

Data e ora inizio/ Initial date and time	Data e ora fine/ End date and time
03/09/2019 09:00:00	04/09/2019 09:00:00

Soluzione/ Solution FeCl3 · 6H2O 10% WATER SOLUTION

Peso iniziale/ Initial weight (g)	48,0673	
Peso finale (g)/ Final weight (g)	48,0670	
Perdita di peso (g)/ Weigth loss (g)	0,0003	
Perdita di massa/ Specimen mass loss	0,0892	g/m²
Limite perdita di massa max/ Limit Specimen mass loss max	**4,0**	**g/m²**

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X / NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Area esaminata/ Examined area cm² 25,88 (LxWx2)/100

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Ingresso Materiale/ Date of Material Arrival **02/09/2019**

Data Rapporto di prova/ Test Report Date **04/09/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector	Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [L]-long.

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RAPPORTO DI PROVA/TEST REPORT

E562 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		**495/19**	**49329**	**ASTM A 815-18 UNS S32760**

Determinazione della Frazione di volume tramite conteggio manuale sistematico dei punti/ Determining volume fraction by systematic manual point count

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Ingrandimento/ Enlargement	Misura del reticolo/ Grid size	Data esecuzione/ Date of Testing
105404	ASTM E 562-11	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	20% NaOH	500 X	40 mm x 40 mm 5 x 5 = 25 Points	04/09/2019

	Valore Min/ Value Min	Valore Max/ Value Max
Ferrite Vv (% Frazione di volume)/ Vv(% Volume Fraction) 47.3	**40**	**55**

s 3,7 95% C.I. 1,4 %RA 2,95

Ferrite % Frazione di volume per ciascun campo esaminato/ % Volume Fraction for each metallographic section

1	**48**	2	**52**	3	**42**	4	**48**	5	**50**
6	**50**	7	**44**	8	**46**	9	**48**	10	**44**
11	**44**	12	**44**	13	**52**	14	**54**	15	**48**
16	**46**	17	**42**	18	**52**	19	**44**	20	**46**
21	**46**	22	**42**	23	**54**	24	**46**	25	**52**
26	**52**	27	**44**	28	**44**	29	**50**	30	**44**

Nr. di campi per provino/sezione/spaziatura/angolo/ Nr. of fields for specimens/section/angle 30 / 11 x 20 mm / 1 x 3.0 mm / 45°

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

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Data Ingresso Materiale/ Date of Material Arrival **02/09/2019**

Data Rapporto di prova/ Test Report Date **04/09/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector	Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2,00

Customer: ROSETTI MARINO S.p.A.

Description: TEE OSD02931H00 TEE UG. 1.1/2" SCH.40/S SEAMLESS

Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT2024000039 48

Protocol: CTCERC20240000890 0 * CERTIFIED TRUE COPY * Issued 09-10-2024

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2.00

Description: TEE OSD 2931H00 TEE UG. 1.1/2" SCH.40/S SEAMLESS

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY * Issued 09-10-2024

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RAPPORTO DI PROVA/TEST REPORT

ANL 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		**495/19**	**49329**	**ASTM A 815-18 UNS S32760**

ANALISI SPETTROMETRICA AD EMISSIONE ATOMICA SOTTOVUOTO/ Atomic emission vacuum Spectrometric analysis

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Temperatura di prova (°C)/ Test temperature (°C)	ID Gruppo / Group ID	Data esecuzione/ Date of Testing
105411	PO 04-145 RC R08, 2018	RTX_D53 Rev.7 + STATOIL -2010080 Rev.0	B UP	20	7995	04/09/19

			%	Min.	Max.				%	Min.	Max.				%	Min.	Max.
C	**0,016**	**± 0,003**	97,5		0,030	**Nb**						**Fe**					
Si	**0,50**	**± 0,02**	97,5		1,00	**Ti**						**Ca**					
Mn	**0,72**	**± 0,02**	97,5		1,00	**W**	**0,63**	**± 0,02**	95,0	0,50	1,00	**Ta**					
P	**0,021**	**± 0,003**	97,5		0,030	**Pb**						**Sb**					
S	**0,005**	**± 0,005**	97,5		0,010	**Sn**						**H**					
Cr	**25,6**	**± 0,3**	95,0	24,0	26,0	**As**						**Cd**					
V						**B**						**Se**					
Mo	**3,6**	**± 0,1**	95,0	3,0	4,0	**N**	**0,28**	**± 0,02**	95,0	0,20	0,30	**Bi**					
Ni	**7,0**	**± 0,1**	95,0	6,0	8,0	**La**						**Hg**					
Cu	**0,67**	**± 0,03**	95,0	0,50	1,00	**Mg**											
Ce						**Zr**											
Al						**Zn**											
Co						**O**											

FORMULAS			%	Min.	Max.
PREN	**42,0**	**± 0,3**	97,5	40,0	

Decision rule:
the result is "Compliant to Specification" when:
- *Result ≥ Lower Limit (confidence interval CI=50÷97,5 %)*
- *Result ≤ Upper Limit (confidence interval CI=50÷97,5 %)*
- *Lower Limit ≤ Result ≤ Upper Limit (confidence interval CI=47,5÷95%)*

When the result falls within the uncertainty range at the limit value, the result can be Probably Compliant or Probably Not Compliant

Expanded uncertainty below reported is based on standard uncertainty multiplied by a coverage factor k = 2 that corresponds to a coverage probability of about 95% for a normal distribution. The evaluation is based on EA 4/16 Ed. 2003

Note/ Remarks

Esito/ Conclusion: Conforme a 'Specifica' / Compliant with 'Specification'

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.

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Data Ingresso Materiale/ Date of Material Arrival: **02/09/2019**

Data Rapporto di prova/ Test Report Date: **04/09/2019**
firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector	Cliente/Customer

Test Position Legend: ; [B]-Specimen in Base Material: [UP]-external sup.

Customer: ROSETTI MARINO S.p.A.
Description: TEE0SD02931H00
TEE UG. 1.1/2" SCH.40/S SEAMLESS
Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948
raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2,00
Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

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RAPPORTO DI PROVA/TEST REPORT

DUR 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

Campione fornito da cliente/Sample supplied by the Customer :

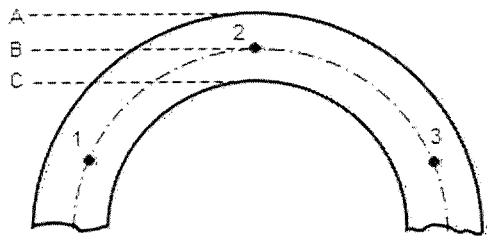
Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		495/19	49329	**ASTM A 815-18 UNS S32760**

PROVA DI DUREZZA HBW (Strumento di misura dell'impronta di Tipo A)/ HBW hardness test (Indentation measuring device Type A)

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position		Durezza/ Hardness	Data esecuzione/ Date of Testing
105403	ASTM E 10-18 except par. 5.7 Portable Hardness Testing Machines	**RTX_D53 Rev.7**	B	T	HBW 2,5/187,5	03/09/2019

(B1) - Base Material **MAX 270**

1 **249** 2 **242** 3 **247**



AB=BC= 1/2 AC

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

Position	Average	StdDev
(B1) - Base Material	246	3,6

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
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Data Ingresso Materiale/ Date of Material Arrival **02/09/2019**

Data Rapporto di prova/ Test Report Date **04/09/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector	Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material; [SZ]-along the thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 11575A019 - Qty:2,00
Description: TEE0SD02931H00
TEE UG. 1.1/2" SCH.40/S SEAMLESS
Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEITT2024000003948
Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

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RAPPORTO DI PROVA/TEST REPORT

MIC 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

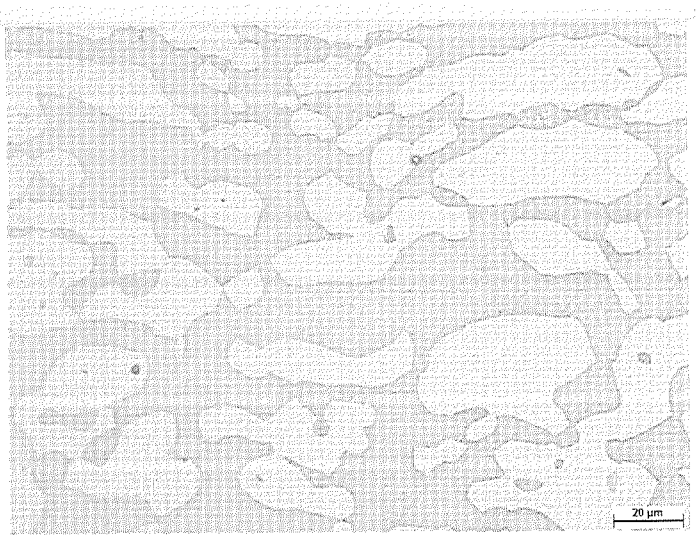
Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		**495/19**	**49329**	**ASTM A 815-18 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
105405	ASTM E 3-11(2017)+ASTM E 407-07(2015)e1	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	02/09/2019

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	10% Oxalic	Materiale base / Base Material
		5.0 x 20.0 = 100.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da nitruri. / Structure free from nitrides.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente , che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA./This test report refers only to the examined sample supplied by the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.
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Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/Inspector	Cliente/Customer
02/09/2019				
Data Rapporto di prova/ Test Report Date **04/09/2019**	*Antonielli Stefano*	*Amani Paolo*		

firmato elettronicamente/electronically signed

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

Customer: ROSETTI MARINO S.p.A.

Description: TEE0SD02931H00
TEE UG. 1.1/2" SCH.40/S SEAMLESS

Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2.00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

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RAPPORTO DI PROVA/TEST REPORT

MIC 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

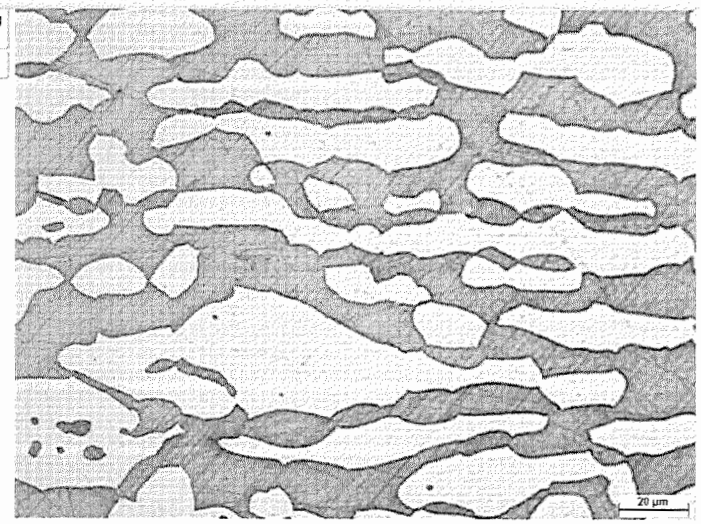
Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	**1**		**495/19**	**49329**	**ASTM A 815-18 UNS S32760**

ESAME MICROGRAFICO/ Micrographic examination

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
105406	ASTM E 3-11(2017)+ASTM E 407-07(2015)e1	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	02/09/2019

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	20% NaOH	Materiale base / Base Material
		5.0 x 20.0 = 100.0 mm²



Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Ingresso Materiale/ Date of Material Arrival **02/09/2019**

Data Rapporto di prova/ Test Report Date **04/09/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2,00
Customer: ROSETTI MARINO S.p.A.
Description: TEE0SD02931H00
TEE UG. 1.1/2" SCH.40/S SEAMLESS
Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948
Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

SIDER TEST Srl
Mechanical and Chemical Laboratory Non Destructive Tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it
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RAPPORTO DI PROVA/TEST REPORT

A923A 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

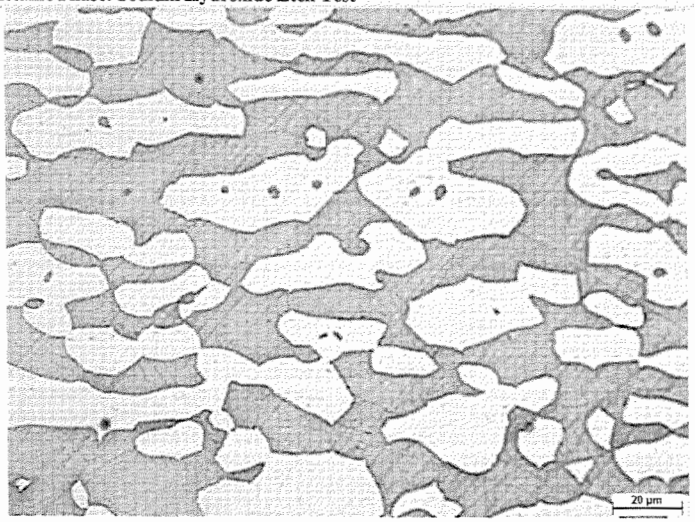
Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		**495/19**	**49329**	**ASTM A 815-18 UNS S32760**

Individuazione di fasi intermetalliche dannose: Attacco con idrossido di sodio/ Detecting Detrimental Intermetallic Phase: Sodium Hydroxide Etch Test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Data esecuzione/ Date of Testing
105410	ASTM A 923-14 (Met. A)	**RTX_D53 Rev.7 + STATOIL -2010080 Rev.0**	B T FT	02/09/2019

Ingrandimento/ Enlargement	Attacco/ Etching	Area esaminata / Examined area:
500 X	40g NaOH to 100g distilled water	Materiale base / Base Material



Classificazione struttura attaccata:Struttura inalterata./Classification of etch structure:Unaffected structure.

Note Tecniche/ Technical Notes: Microstruttura ferritica-austenitica / Ferritic-austenitic microstructure. Struttura libera da precipitazioni a bordo grano,fasi intermetalliche e precipitati/Structure free from grain boundary carbides, intermetallic phases and precipitates.

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Rapporto di prova/ Test Report Date **04/09/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector

Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material; [FT]-full thickness; [T]-trasv.

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2,00
Description: TEE OSD 02931H00
TEE UG. 1.1/2" SCH.40/S SEAMLESS
Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948
Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

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RAPPORTO DI PROVA/TEST REPORT

A923C 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		**495/19**	**49329**	**ASTM A 815-18 UNS S32760**

Individuazione di fasi intermetalliche dannose: Prova di corrosione per "pitting" in cloruro ferrico/ Detecting Detrimental Intermetallic Phase: Ferric Chloride Pitting Corrosion Test

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Posizione di prelievo/ Test position	Preparazione provino/ Specimen preparation	Lunghezza/ Length mm	Larghezza/ Width mm	Spessore/ Thickness mm	Area/ Area cm²
105409	ASTM A 923-14 (Met. C)	**RTX_D53 Rev.7**	B L FT	Meccanica/ Mechanical	23,06	48,96	5	29,78

Temperatura di prova (°C)/ Test temperature (°C) 50

Temperatura Minima Rilevata (°C)/ Minimum specimen preparation (°C) 49,7

Temperatura Massima Rilevata (°C)/ Maximum specimen preparation (°C) 50,2

Tempo di esposizione (ore)/ Exposure time (hours) 24

Data inizio/ Initial date	Data fine/ End date
03/09/2019 09:00:00	04/09/2019 09:00:00

Soluzione/ Solution FeCl3 · 6H2O 10% water solution

Peso iniziale/ Initial weight (g)	44,3776
Peso finale (g)/ Final weight (g)	44,3766
Perdita di peso (g)/ Weigth loss (g)	0,0010

NON SONO STATI RISCONTRATI PIT NEL CAMPIONE IN ESAME A 20 X /
NO PITS HAVE BEEN FOUND IN THE SPECIMEN TESTED AT 20 X

Velocità di corrosione/ Corrosion speed	(mg/(dm²*d))	**3,4**
Limite velocità di corrosione (mg/(dm²*d)) max./ Corrosion rate limit (mg/(dm²*d)) max.		**10,0**

Esito/ Conclusion: **Conforme a 'Specifica'/ Compliant with 'Specification'**

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Data Rapporto di prova/ Test Report Date **04/09/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Antonielli Stefano*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector	Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness; [L]-long.

Customer: ROSETTI MARINO S.p.A.

Description: TEE OSD02931H00 TEE UG. 1.1/2" SCH.40/S SEAMLESS

Heat num. or Pcs. marking: 1157SA019 - Qty:2,00

Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY * Issued 09-10-2024

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RAPPORTO DI PROVA/TEST REPORT

PM 19752 / 19

Rif. Lab SIM (FCP) : **6512 / 19 (A / A)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Cliente/Customer **Tecninox Srl Via Don Spagnoli, 5 29010 Sarmato PC**

Ordine/Order **OF005236**

Commessa/Job **44/19 19/1356**

Campione fornito da cliente/Sample supplied by the Customer :

Descrizione/Description	Qta/Qty	Posizione/Item	Prova Nr./ Test Nr.	Colata/Heat	Materiale/Material
SACRIFICAL PIECE 1.1/2" W.T. 5.08 mm	1		**495/19**	**49329**	**ASTM A 815-18 UNS S32760**

PROVA DI TRAZIONE A TEMPERATURA AMBIENTE/ Tensile test at room temperature

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Dimensioni/ Dimension Wth	Ø / Width	ØPipe	Lo/ Lo	Posizione di prelievo/ Test position	Temp./ Temp.	Snervamento/ Yield strength			Rottura/ Tensile strength Rm		Allungamento/ Elongation		Strizione/ Area Reduction	S/R/ Ratio Yield strength / Tensile strength	Data esecuzione/ Date of Testing
			mm					°C	Mpa		Mpa	Mpa		A (%)		Z (%)		
105401	ASTM A 370-18 (Tension Test)	**RTX_D53 Rev.7**	5,21	12,50		50,00	B L FT	23	(≥550)	Rp0,2% **642**		(750÷895)	**881**	(≥25)	**35,3**			03/09/2019

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

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Data Rapporto di prova/ Test Report Date **04/09/2019**

firmato elettronicamente/electronically signed

Responsabile di Reparto o sostituto/ Department Manager or Deputy: *Morresi Davide*

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy: *Amani Paolo*

Ispettori/Inspector	Cliente/Customer

Test Position Legend: [B]-Specimen in Base Material: [FT]-full thickness; [L]-long.

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TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RÉCEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 648100 Page: 1 / 6	Rev: 00
Created on: Date: 16.06.2016	Modified on: 24.06.2016

TTI - TUBACEX TUBOS INOXIDABLES
Registro Mercantil de Alava, Tomo 587, Folio 189, Hoja VI 2885 - N.I.F. A-01140227

Tres cruces, 8
01400 Llodio (Alava)
SPAIN

TL: +34 946719300
FAX: +34 946725062
E-MAIL: qualitytti@tubacex.es

202862

CUSTOMER DESCRIPTION/DESCRIPCIÓN DEL CLIENTE/KUNDENBEZEICHNUNG/COMMETTANT

CLIENT SOLD TO/SOLICITANTE/AUFTRAGGEBER/COMMETTANT

TSS
TUBACEX SERVICE SOLUTIONS, S.A.U
POLIGONO INDUSTRIAL SARATXO
01470 AMURRIO

SOLD TO:RACCORTUBI S.P.A.
SOLD P.O. REF.:OS000042 S
SOLD ORDER REF.:334420
COPY NUMBER: 001

CLIENT ORDER/PEDIDO CLIENTE/KUNDEN AUFTRAGSNUMMER/NO.DE COMMANDE: 504654

SALES ORDER/PEDIDO VENTAS/AUFTRAGSNUMMER/NO.DE COMMANDE D'USINE: 182919

MATERIAL:SEAML. STAINL. STEEL TUBES/PIPES/TUBOS INOXIDABLES SIN SOLDADURA/TUBES INOX SANS SOUDURE/NAHTLOSE EDELSTAHLROHRE

HEAT-TREATED, PICKLED / TRATADO, DECAPADO / HYPERTREMPE, DECAPE / WÄRMEBEHANDELT, GEBEIZT, PASSIVATED / PASIVADO / PASSIVÉ / PASSIVIERT

GRADE / ACERO / GRADE / WERKSTOFF: S32760,1.4501,

STANDARD / NORMA / STANDARD / LIEFERUNG NACH: ASME SECT.II PART.A SA790/SA790M-2013 ED.

ASTM A790/A790M-14a

EN 10216-5:2013 TC2

EN 10297-2:2005

NORSOK M650 QTR No.2

NORSOK M630 REV.6 MDS D51 REV.5

SHELL ES/247 REV.2 EXCEPT STRESS CORROSION TEST (POINT 7.2)-,

DPI (TABLE 1) AND SURFACE REQUIREMENTS (POINT 9.1)

FERRITE CONTENT IN ACC. WITH ASTM E562

NACE MR0103-2012

NACE MR0175/ISO 15156-3:2015

SHELL MESC SPE 74/014 JANUARY 2015 EXCEPT:

NO STRESS CORROSION TEST (POINT 13.7.2),

NO LIQUID PENETRANT TEST (POINT 14.12.1),

FLATTENING TEST AS PER ASTM A790

CHECK ANALYSIS ACCORDING TO ASTM A790

TENSILE TEST ONLY IN LONGITUDINAL DIRECTION.

ULTRASONIC TEST IN ACCORDANCE WITH ASTM A450/E213 LONGITUDINAL ONLY.

ULTRASONIC TEST ACCORDING TO ASTM A450/E213

TOLERANCES / TOLERANCIAS / TOLERANCES / TOLERANZEN NACH: ASME SECT.II PART.A SA999/SA999M-2013 ED.

ASTM A999/A999M-14

EN ISO 1127/03.97 D3/T3

RANDOM LENGTHS / LARGOS VARIABLES / LONGUEUR COURANTE / EINGEENGTE LÄNGE 5.000/7.000 MM

PLAIN ENDS / LISOS / EXTRÉMITÉ D'EQUERRE / GLATTE ENDEN,

DIMENSIONS/DIMENSIONES/DIMENSIONS/DIMENSIONS: 48,26 X 5,08 MM - 1.1/2" SCH 80S

COLD FINISHED/LAMINADOS EN FRIO/KALTGEFORMT/LAMINES A FROID

AENOR ER Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order#s requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

Iñigo Arriola Aloibar

TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate. TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: TEE0SD02931H00
TEE UG. 1.1/2" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
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EN 10204:2004 / 3.1

Number: 648100 Page: 2 / 6	Rev: 00
Created on: Date: 16.06.2016	Modified on: 24.06.2016

Sales Item / Pos Ped. / AuftrgPos / Usine Pos	Client Item / Pos Clnt / Kunde Pos / Com. Pos	Delivery No / Nº Entrega / Lieferung / Avis. d'exp	Lot No. / Nº lote / Los Nr. / Lot d'inspection	Heat No / Colada / Schmelze / Coulée	Pieces / Piezas / Stück / Pcs	Weight / Peso / Gewicht / Poids	Tot Lgth / Long. Tot / Gesamtlänge / Tolength	Un Lgth / Long. Un / Längentyp / Long. Un
10		8110045038	P1602531	49329	16	562 KG	104,34 M	5000-7000 MM

RAW MATERIAL/DATOS MATERIAL/VORMATERIAL/MATIERE PREMIERE

Heat Nr:	Method
49329	Electric furnace+AOD

CHEMICAL COMPOSITION (%)/COMPOSICIÓN QUÍMICA (%)/CHEMISCHE ZUSAMMENSETZUNG (%)/COMPOSITION CHIMIQUE(%)

*L: Ladle C:Products

*	Heat	Seq	C	Mn	Si	P	S	Ni	Cr	Mo	Cu	W
L	49329	1	0,014	0,69	0,460	0,020	0,0004	6,95	25,55	3,62	0,66	0,620
C	49329	24	0,016	0,69	0,460	0,020	0,0010	6,95	25,45	3,65	0,68	0,630

*	Heat	Seq	N	Pren
L	49329	1	0,2680	41,7840
C	49329	24	0,2680	41,7830

HEAT TREATMENT/TRATAMIENTO TÉRMICO/WÄRMEBEHANDLUNG/TRAITEMENT THERMIQUE

HIPERTEMPLADOS A 1100 °C , 7 min , Agua
SOLUTION ANNEALED AT 1100 °C , 7 min , WATER
HYPERTREMPES 1100 °C , 7 min , L' EAU
LOESUNGSGEGLUEHT 1100 °C , 7 min , Wasser

TENSILE TEST/TEST DE TENSIÓN/ESSAI TRACTION/ZUGVERSUCH

Lot No.	Sample	T	Rp0.2	Rp1.0	Rm	A2"	A5	Type	Spc.Type	Spc.Dim
		°C	*MPa*	*MPa*	*MPa*	*%*	*%*			*mm*
P1602531	1	20	734	827	925	32	31	L	S	19,00

HARDNESS TEST/TEST DE DUREZA/DUREE/HÄRTEPRÜFUNG

Lot No.	Sample	HRC1	HRC2
P1602531	1	25,0	26,0

IMPACT TEST/TEST DE IMPACTO/RESILIENCE/KERBSCHLAGVERSUCH

Lot No.	Sample	T	Wspec	Ecv 1	Ecv 2	Ecv 3	Ecv AVG	Type
		°C	*mm*	*J*	*J*	*J*	*J*	
P1602531	1	-51	10,00	206	212	246	222	L

CORROSION ACCORDING TO ASTM A923 C/CORROSION DE ACUERDO ASTM A923 C/CORROSION SUIVANT ASTM A923 C/CORROSION ACCORDING TO ASTM A923 C

Lot No.	Sample	T	Pits-20x	Wloss	time
		°C		*MDD*	*Horas*
P1602531	1	50	N	1,2024	24,0

AENOR Empresa Registrada UNE EN ISO 9001

AENOR Gestión Ambiental UNE EN ISO 14001

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order#s requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: TEE0SD02931H00
TEE UG. 1.1/2" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
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CERTIFICAT DE RECEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 648100 Page: 3 / 6	Rev: 00
Created on: Date: 16.06.2016	Modified on: 24.06.2016

Corrosion test ASTM G48 practice A/Corrosión ASTM G48 práctica A/TEST DE CORROSION ASTM G48 practice A/LOCHFRASSTEST ASTM G 48 PR.A

Lot No.	Sample	T °C	Pits-20x	W.loss g/m2	time Horas
P1602531	1	50	N	0,1202	24,0

FERRITE ACCORDING TO ASTM E 562/Contenido de Ferrita según ASTM E562/FERRITE SUIVANT ASTM E562/FERRIT ENTSPRECHEND ASTM E562

Lot No.	Sample	%Fer %	Dev.Ferr %
P1602531	1	51,42	0,87

METALURGICAL TESTS/ENSAYOS METALÚRGICOS/METALLURGISCHE PRÜFUNGEN/ESSAIS METALLURGIQUES

ETCH STRUCTURE ACC. ASTM A923 MET.A: UNAFFECTED STRUCTURE. MATERIAL FREE FROM INTERMETALLIC PHASES AND PRECIPITATES. UNIFORM STRUCTURE ACROSS FULL WALL THICKNESS
EXAMEN DE MICROESTRUCUTRA DE ACUERDO A ASTM A923 MET.A: ESTRUCTURA NO AFECTADA. MATERIAL LIBRE DE FASES INTERMETALICAS Y PRECIPITADOS. ESTRUCTURA UNIFORME A TRAVES DEL ESPESOR.

INTERGRANULAR CORROSION TEST ACC.TO DIN EN ISO 3651-2 MET.B: SATISFACTORY
ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ISO 3651-2 MET.B: SATISFACTORIO
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND ISO 3651-2 MET."B": IN ORDNUNG
ESSAI DE CORR. INTERGR. SELON ASTM ISO 3651-2 MET."B":SATISFAISANT
INTERGRANULAR CORROSION TEST ACC. TO ASTM A262 PRACT.E/MIL-P-24691-3/ MIL-1144D:SATISFACTORY

NON-DESTRUCTIVE TESTS/ENSAYOS NO DESTRUCTIVOS/ZERSTÖRUNGSFREIE PRÜFUNGEN/ESSAIS NON DESTRUCTIFS

FERRITE CONTENT DETERMINED BY FISCHER FERRITOSCOPE TO 100% OF PRODUCTS TO BE BETWEEN 35% - 55% FERRITE CONTENT

CONTENIDO EN FERRITA MEDIDO CON FERRITOSCOPIO SOBRE EL 100% DE LOS TUBOS, CONTENIDO EN FERRITA COMPRENDIDO ENTRE 35% - 55%

100% ULTRASONIC TEST ACC. TO ASTM E.213: SATISFACTORY
100% ENSAYO DE ULTRASONIDOS DE ACUERDO A ASTM E.213: SATISFACTORIO
100% ULTRASCHALLPRÜFUNG NACH ASTM E.213:IN ORDNUNG
100% ESSAI D´ULTRASON D'ACCORD A ASTM E.213: SATISFAISANTE

POSITIVE MATERIAL IDENTIFICATION TEST ON EACH TUBE/PIPE BY "X-RAY-FLUORESCENCE-ANALYZER": SATISFACTORY

AENOR ER Empresa Registrada UNE EN ISO 9001
AENOR Gestión Ambiental UNE EN ISO 14001

TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

Iñigo Arriola Aloibar

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies orders requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate, TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: TEE0SD02931H00
TEE UG. 1.1/2" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

TTI
TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RECEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 648100 Page: 4 / 6	Rev: 00
Created on: Date: 16.06.2016	Modified on: 24.06.2016

VERIFICACION DEL GRADO DE ACERO EN CADA TUBO MEDIANTE "ANALIZADOR DE FLUORESCENCIA DE RAYOS X": SATISFACTORIO
VERWECHSLUNGSPRUEFUNG AN JEDEM ROHR MIT "RÖNTGEN-FLUORESZENZ-ANALYSATOR": IN ORDNUNG
VERIFICATION DE LA NUANCE SUR CHAQUE TUBE PAR "X-RAY-FLUORESCENCE-ANALYZER": SATISFAISANT

HYDROSTATIC PRESSURE TESTED AT 170 bar, 2500 PSI DURING 5 SEC ON EACH TUBE/PIPE: SATISFACTORY
ENSAYO HIDROSTÁTICO A 170 bar, 2500 PSI DURANTE 5 SEC EN CADA TUBO: SATISFACTORIO
WASSERDRUCKPRÜFUNG BEI 170 bar, 2500 PSI HALTEZEIT 5 SEC JE ROHR: IN ORDNUNG
ESSAI DE PRESSION HYDROSTATIQUE À 170 bar, 2500 PSI PENDANT 5 SEC SUR CHAQUE TUBE: SATISFAISANT

100% EDDY CURRENT TEST AT DIN EN 10246-2: SATISFACTORY
100% ENSAYO DE CORRIENTES INDUCIDAS DE ACUERDO A DIN EN 10246-2: SATISFACTORIO
100% WIRBELSTROM PRUEFUNG NACH DIN EN 10246-2: O.B.
100% CONTROLE COURANTS FOUCAULT D'APRES DIN EN 10246-2: BIEN

DIMENSIONAL CHECKING ON EACH TUBE: SATISFACTORY
INSPECCION DIMENSIONAL AL 100% DE LOS TUBOS SATISFACTORIA
100% MASSKONTROLLE: O.B.
VERIFICATION DIMENTIONNELLE AU 100% DES TUBES, SATISFAISANTE

VISUAL INSPECTION ON EACH TUBE: SATISFACTORY
INSPECCION VISUAL AL 100% DE LOS TUBOS, SATISFACTORIA
100% BESIGCHTIGUNG: O.B.
EXAMEN VISUEL AU 100% DES TUBES, SATISFAISANT

TECHNOLOGICAL TESTS/ENSAYOS TECNOLÓGICOS/TECHNOLOGISCHE PRÜFUNGEN/TECHNOLOGICAL TESTS

FLARING TEST: SATISFACTORY
ABOCARDADO S.NORMA: SATISFACTORIO
AUFWEITVERSUCH: IN ORDNUNG
ESSAI D'EVASEMENT: SATISFAISANT

FLATTENING TEST: SATISFACTORY
APLASTADO S.NORMA: SATISFACTORIO
RINGFALTVERSUCH: IN ORDNUNG
ESSAI D'APLATISSEMENT: SATISFAISANT

AENOR ER Empresa Registrada UNE EN ISO 9001

AENOR Gestión Ambiental UNE EN ISO 14001

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TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

Iñigo Arriola Alcibar

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: TEE0SD02931H00
TEE UG. 1.1/2" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

TTI
TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RÉCEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 648100 Page: 5 / 6	Rev: 00
Created on: Date: 16.06.2016	Modified on: 24.06.2016

MARKING/ETIQUETADO/KENNZEICHNUNG/MARKSTEXT

TX2 TX1 TUBACEX 48,26 X 5,08 MM - 1.1/2" SCH 80S ASME SA790 ASTM A790 EN 10216-5 TC2 EN 10297-2 S32760 1.4501 CFD CD SMLS HEAT/ PMI-AV LOT NO/ MADE IN SPAIN

REMARKS/OBSERVACIONES/ANMERKUNG/REMARQUES

NO MERCURY, MERCURY COMPOUNDS OR MERCURY BEARING INSTRUMENTS AND/OR EQUIPMENT HAVE BEEN USED ALONG MANUFACTURING AND INSPECTION PROCESS.
DURANTE LOS PROCESOS DE FABRICACIÓN E INSPECCIÓN NO SE HA USADO MERCURIO NI INSTRUMENTOS Y/O EQUIPOS CONTENIENDO MERCURIO O CON COMPONENTES DE MERCURIO.
KEINE QUEKSILBER, BZW. QUECKSILBERVERUNREINIGTES KOMPONENTEN ODER KUGELLAGERINSTRUMENTE UND/ODER GERÄTE SIND BENUTZT WORDEN PRODUKTIONS UND BESICHTIGUNGSPROZESS.
IL N'A PAS ÉTÉ FAIT USAGE DE MERCURE, DE COMPOSÉS CONTENANT DU MERCURE OU DE MATÉRIAUX ET/OU D'INSTRUMENT CONTENANT DU MERCURE TOUT AU LONG DES ÉTAPES DE FABRICATION ET DU PROCESSUS D'INSPECTION ET DE CONTRÔLE.

NO WELDING OR WELD REPAIRS WERE MADE
SIN REPARACION POR SOLDADURA
KEINE SCHWEISSBEARBEITUNG WURDE VORGENOMMEN
SANS RÉPARATION AVEC SOUDURE

MATERIAL MANUFACTURER APPROVED BY TÜV SÜD Industrie Service GmbH (NOTIFIED BODY 036)TO ISSUE CERTIFICATES OF SPECIFIC PRODUCT CONTROL IN ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE 97/23/EC ANNEX 1 POINT 4.3.
FABRICANTE DE MATERIALES APROBADO POR TÜV SÜD Industrie Service GmbH (ORGANISMO NOTIFICADO 0036) PARA LA EMISION DE CERTIFICADOS ESPECIFICOS DE CONTROL DE PRODUCTO DE ACUERDO AL ANEXO 1, PUNTO 4.3 DE LA DIRECTIVA DE EQUIPOS A PRESION 97/23/EC.
WERKSTOFFHERSTELLER MIT BERECHTIUNG ZUR AUSSTELLUNG VON BESCHEINIGUNGEN ÜBER SPEZIFISCHE PRÜFUNGEN AN DEN WERKSTOFFEN IM GELTUNGSBEREICH DER ZERTIFIZIERUNG UND IN ÜBEREINSTINSTIMMUNG MIT DER DRUCKGERÄTERICHTLINIE 97/23/EC UND DEN ZUGRUNDE LIEGENDEN SPEZIFIKATIONEN ENTSPR. DER BENANNTEN STELLE NR.0036, TÜV SÜD Industrie Service GmbH
PRODUCTEUR DU MATERIEL APPROUVE PAR TÜV SÜD Industrie Service GmbH N.B. 0036) POUR EMISSION DES CERTIFICATS SPECIFIQUE DE CONTROLE DE PRODUIT SELON LA DIRECTIVE DES EQUIPES A PRESION 97/23/EC ANNEXE 1 POINT 4.3.

MATERIAL CHARACTERISTICS COMPLY WITH POINT 7.5 OF ANNEX I TO PED BY HAVING AN ELONGATION AFTER RUPTURE AT TENSILE TEST NO LESS THAN 14% AND A BENDING RUPTURE ENERGY AT IMPACT TEST NO LESS THAN 27J AT 20°C.
LAS CARACTERISTICAS DEL MATERIAL CUMPLEN CON LOS REQUISITOS DEL PUNTO 7.5 DE LA DIRECTIVA PED POR TENER UN ALARGAMIENTO TRAS ROTURA EN EL ENSAYO DE TRACCION NO INFERIOR AL 14% Y PO DE TRACCION NO INFERIOR AL 14% Y POR TENER UNA RESISTENCIA AL IMPACTO NO INFERIOR A 27 J A 20° C.
DIE WERKSTOFF-WERTE ENTSPRECHEN PUNKT 7.5. DER DGRL, ANHANG 1, MIT EINERBRUCHDEHNUNG = 14% IM NORMGEMÄSS DURCHGEFÜHRTEN ZUGVERSUCH UND DER KERBSCHLAGARBEIT = 27J AN EINER ISO - v PRO PROBE BEI EINER TEMPERATUR VON HÖCHSTENS 20°C
LES CARACTERISTIQUES DU MATERIEL, AYANT UN ALLONGEMENT APRES RUPTURE A L'ESSAI DE TRACTION NON INFERIEUR DU 14% ET UNE RESISTENCE A LA FLEXION PAR CHOC A 20°C NON INFERIEUR A 27J, SONT CONFORMES AUX PRESCIPTIONS DU PONT 7.5 DE L'ANNEXE I DE PED.

MATERIAL IS FREE OF RADIATION CONTAMINATION

AENOR ER Empresa Registrada UNE EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

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TUBACEX TUBOS INOXIDABLES S.A.U.
INGENIERIA DE CALIDAD

Iñigo Arriola Alcibar

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: TEE0SD02931H00
TEE UG. 1.1/2" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED COPY
* Issued 09-10-2024

TTI
TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RECEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 648100 Page: 6 / 6	Rev: 00
Created on: Date: 16.06.2016	Modified on: 24.06.2016

REMARKS/OBSERVACIONES/ANMERKUNG/REMARQUES
EL MATERIAL ESTA LIBRE DE CONTAMINACION POR RADIACIONES
MATERIAL IS FREI VON RADIOAKTIVITÄT
MATÉRIEL LIBRE DE POLUTION RADIOACTIVE

AENOR ER Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

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TTI TUBACEX GROUP

INSPECTION CERTIFICATE
EN 10204 3.1
Annex 1
Microphotographs

Number	:	648100
Page	:	1/2
Date	:	29/06/2016

TTI - TUBACEX TUBOS INOXIDABLES, S.A.U.

Registro Mercantil de Alava, Tomo 587, Folio 189, Hoja VI2885 - N.I.F. A-01140227
Tres Cruces, 8
01400 Llodio (Álava)
SPAIN

Sales Order	:	182919
Sales Item	:	10
Standard	:	ASTM A790
Grade	:	UNS S32760
Dimensions	:	1.1/2" SCH 80S

Microstructure: MATERIAL FREE FROM INTERMETALLIC PHASES AND PRECIPITATES. UNIFORM STRUCTURE ACROSS FULL WALL THICKNESS



P1602531 182919-10 C-49329 LONG 500X.jpg

AENOR ER Empresa Registrada UNE-EN ISO 9001
AENOR GP Gestión Ambiental UNE-EN ISO 14001

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TUBACEX TUBOS INOXIDABLES
INGENIERIA DE CALIDAD
Iñigo Arriola Alcibar

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: TEE0SD02931H00
TEE UG. 1.1/2" SCH.40/S SEAMLESS

raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
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TTI TUBACEX GROUP

INSPECTION CERTIFICATE
EN 10204 3.1
Annex 1
Microphotographs

Number	:	648100
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Date	:	29/06/2016

TTI - TUBACEX TUBOS INOXIDABLES, S.A.U.

Registro Mercantil de Alava, Tomo 587, Folio 189, Hoja VI2885 - N.I.F. A-01140227
Tres Cruces, 8
01400 Llodio (Álava)
SPAIN

Sales Order	:	182919
Sales Item	:	10
Standard	:	ASTM A790
Grade	:	UNS S32760
Dimensions	:	1.1/2" SCH 80S

Microstructure: MATERIAL FREE FROM INTERMETALLIC PHASES AND PRECIPITATES. UNIFORM STRUCTURE ACROSS FULL WALL THICKNESS



P1602531 182919-10 C-49329 TRANS 500X.jpg

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Order: 1724001828 - 12.09.24 - Item n.: 270 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

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raccortubi Heat num. or Pcs. marking: 1157SA019 - Qty:2,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
* Issued 09-10-2024

CTCERT202400006256.1.0001

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	8055-P3	19/09/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00006433	

	Item	Quantity	Heat id.
3	TEE 1.1/2" x 3/4" XS WPL6	1,00	14E-14E5482-J5L3682

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	TEE COLD FORMED, THEN HEAT TREATED AND MAGNETIC PARTICLE EXAMINATED ACCORDING ASTM E709
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Nb%
0,110	1,340	0,220	0,006	0,005	0,020	0,120	0,010	0,030	0	0

CE_{IIW} 0,36

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	330	476	33

Impact Test

Direction L **Test Temperature** -46 °C **Test Type** KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
2.5 X 10	0,2	Base Mat.	39	46	41	42

Hardness Test

Base Metal **Avg** 141 HBW

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector / Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini		

This certificate is issued by a computerized system and is valid without stamp and signature
This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 280 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: TER0CS04991H3Q
TEE RID. 1.1/2"x3/4" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 14E - Qty:1,00

Protocol: CTCERC202400008900 * CERTIFICATE COPY
* Issued 09-10-2024

EITI - The Inspection Body

qualytube

EITI S.r.l. - Qualytube Division
Via Pietro Palmieri 29, 10138 Torino
Via Enrico Berlinguer 4, 20060 Pozzo d'Adda (MI)

MagneticTest Report

Test Report
Rapporto di Prova
Prüfbericht
Rapport d'essai

Report No. - Rapporto N°
Berichten Nr. - Rapport N° : MT24033

Date - Data - Vom - date : 20/09/2024

Customer - Cliente - Besteller - Acheteur 1)
RACCORTUBI

Customer - Cliente - Besteller - Acheteur 2)

Order No. - Ordine N° - Bestell-Nr. - Commande N°
No. 82

Performed Test
100% MAGNETIC TEST ON ACCESSIBLE SURFACE

Material Description- Descrizione del Materiale
Gegenstand - Dèsignation du Produit
see table below

		According to	EN 10246-12 ASTM E709 - ASME VIII Division 1 App.6/8
Test	Electromagnetic joke	**According to**	ASTM SA960 SUPPLEMENTARY S53
Particles type	fluorescent	**Particles Description**	MG ICRI G182 batch. No. 2015 04 H2
Joke	AC - Magnafulx	**Inspection conditions**	BLACK UV LIGHT - 1000 µW/cm2 min.
Calibration block	ASME 4,5 Kg	**Pie gauge**	ASME

Result - Esito
Ergebnis - Résultat
SATISFACTORY
NO REPORTABLE INDICATIONS HAVE BEEN FOUND

ITEM	DIAMETER (NPS) THICKNESS (mm)	STANDARD / GRADE	HEAT	No.		NOTE
1	1.1/2" sch. XS	CAPS ASME/ASTM SA/A 420 WPL6	16I-16I2373	1		
5	4"x1.1/2" STD/XS	RID. ECC. ASME/ASTM SA/A 420 WPL6	513131	1		
2	1.1/2" XS	TEE UG. ASME/ASTM SA/A 420 WPL6	0D-0D1533	1		
3	1.1/2"x3/4" XS	TEE RID. ASME/ASTM SA/A 420 WPL6	14E-14E5482-J5L3682	1		
4	1.1/2"x1" XS	TEE RID. ASME/ASTM SA/A 420 WPL6	54-J9KA054	3		

issued by **Verified by** **Customer**

Qualytube
Nicolò Tutini - NDT Specialist
ISO 9712 EITI 12046/PND/C Level 2 UT
ISO 9712 CICPND 27058/PND/C Level 2 PT
ISO 9712 CICPND 28229/PND/C Level 2 MT

EITI - European Institute of Technical Inspections
Dario pasqualini
Technical Director
ISO 9712 Level 3 – UT/PT/VT/RT

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 280 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: TER0CS04991H3Q
TEE RID. 1.1/2"x3/4" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 14E - Qty:1,00

Protocol: CTCERC202400008900 * CERTIFIED TRUE COPY
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I.R.C. S.p.A.
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Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	8055-P4	19/09/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00006433	

	Item	Quantity	Heat id.
4	TEE 1.1/2" x 1" XS WPL6	3,00	54-J9KA054

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	TEE COLD FORMED, THEN HEAT TREATED AND MAGNETIC PARTICLE EXAMINATED ACCORDING ASTM E709
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Ti%	Nb%	B%
0,110	1,270	0,280	0,009	0,001	0,020	0,130	0,010	0,010	0	0,0100	0	0,0001

CE_{IIW} 0,35

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	311	519	32

Impact Test

Direction L **Test Temperature** -46 °C **Test Type** KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
2.5 X 10	0,2	Base Mat.	39	37	35	37

Hardness Test

Base Metal **Avg** 133 HBW

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector / Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini		

This certificate is issued by a computerized system and is valid without stamp and signature
This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 290 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: TER0CS26141H01
TEE RID. 1.1/2"x1" XS SEAMLESS

EITI - The Inspection Body.

qualytube

EITI S.r.l. - Qualytube Division
Via Pietro Palmieri 29, 10138 Torino
Via Enrico Berlinguer 4, 20060 Pozzo d'Adda (MI)

MagneticTest Report

Test Report
Rapporto di Prova
Prüfbericht
Rapport d'essai

Report No. - Rapporto N°
Berichten Nr. - Rapport N° : MT24033

Date - Data - Vom - date : 20/09/2024

Customer - Cliente - Besteller - Acheteur 1)
RACCORTUBI

Customer - Cliente - Besteller - Acheteur 2)

Order No. - Ordine N° - Bestell-Nr. - Commande N°
No. 82

Performed Test
100% MAGNETIC TEST ON ACCESSIBLE SURFACE

Material Description- Descrizione del Materiale
Gegenstand - Dèsignation du Produit
see table below

Test	Electromagnetic joke
Particles type	fluorescent
Joke	AC - Magnafulx
Calibration block	ASME 4,5 Kg

According to	EN 10246-12 ASTM E709 - ASME VIII Division 1 App.6/8
According to	ASTM SA960 SUPPLEMENTARY S53
Particles Description	MG ICRI G182 batch. No. 2015 04 H2
Inspection conditions	BLACK UV LIGHT - 1000 µW/cm2 min.
Pie gauge	ASME

Result - Esito
Ergebnis - Résultat
SATISFACTORY
NO REPORTABLE INDICATIONS HAVE BEEN FOUND

ITEM	DIAMETER (NPS) THICKNESS (mm)	STANDARD / GRADE	HEAT	No.		NOTE
1	1.1/2" sch. XS	CAPS ASME/ASTM SA/A 420 WPL6	16I-16I2373	1		
5	4"x1.1/2" STD/XS	RID. ECC. ASME/ASTM SA/A 420 WPL6	513131	1		
2	1.1/2" XS	TEE UG. ASME/ASTM SA/A 420 WPL6	0D-0D1533	1		
3	1.1/2"x3/4" XS	TEE RID. ASME/ASTM SA/A 420 WPL6	14E-14E5482-J5L3682	1		
4	1.1/2"x1" XS	TEE RID. ASME/ASTM SA/A 420 WPL6	54-J9KA054	3		

issued by **Verified by** **Customer**

Qualytube
Nicolò Tucani - NDT Specialist
ISO 9712 CICPND 28045/PND/C Level 2 UT
ISO 9712 CICPND 27050/PND/C Level 2 PT
ISO 9712 CICPND 28229/PND/C Level 2 MT

EITI - European Institute of Technical Inspections
Dario pasqualini
Technical Director
ISO 9712 Level 3 – UT/PT/VT/RT

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 290 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: TER0CS26141H01
TEE RID. 1.1/2"x1" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 54 - Qty:3,00

Protocol: CTCERC202400008900 * CERTIFICATE ISSUE COPY
* Issued 09-10-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724001828	123A90A	Q012400893

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **24.10.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 23/10/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00009192
Packing list	PLPLIS202400009133
Ns. Rif.	00003948
Vs. Rif.	1724001828 - 12.09.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00009192

23/10/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00003948

Ordine N. P.O. number: 1724001828 - 12.09.24

123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*	Immagine *Image*
60	2	FLW0CS22230H00 Flange WN ASME B16.5 150LB FF FRG ASTM/ASME A/SA350 Gr.LF2 1/2" thk 3.73mm	22/75635	CTCERT202400006519_1.0001.TIF CTCERT202400006519_2.0001.TIF
70	2	FLW0CS22243Q00 Flange WN ASME B16.5 150LB FF FRG ASTM/ASME A/SA350 Gr.LF2 3/4" 3,91mm	23/70335	CTCERT202400006520_1.0001.TIF CTCERT202400006520_2.0001.TIF
130	1	REE0CS1728041H RID. ECC. 4"x1.1/2" STD/XS SEAMLESS	513131	CTCERT202400006258_1.0001.TIF CTCERT202400006258_2.0001.TIF

raccortubi

00009192

23/10/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 23/10/2024

Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				FLANGE IN ACCIAIO CALMATO ASTM A-350 GRADO LF2	
60	NR	2	0.00	FLW0CS22230H00 Flange WN ASME B16.5 150LB FF FRG ASTM/ASME A/SA350 Gr.LF2 1/2" thk 3.73mm	22/75635
70	NR	2	0.00	FLW0CS22243Q00 Flange WN ASME B16.5 150LB FF FRG ASTM/ASME A/SA350 Gr.LF2 3/4" 3,91mm	23/70335
				RACCORDI SEC. ASME/ASTM SA/A 420 GR.WPL6, DIM./SMUSSI ANSI B16.9, B16.25	
130	NR	1	0.00	REE0CS1728041H RID. ECC. 4"x1.1/2" STD/XS SEAMLESS	513131

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — **Nr** A03 2024-C_MFF-02265 — **Data / Dated** 01.10.2024 Z02

RACCORTUBI S.P.A. A06		**Ordine / PO**	6435 A07
Viale Lidice 38/40/42		**Item**	001 A07
10095 GRUGLIASCO TO IT		**DDT / Delivery note**	2024-3E301-0002216 A10
		Packing List	A11
		Fattura / Invoice	A12
		Ns. rif. / Our ref.	2024-3E201-0001413-0001 A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	22/75635	2,00	WN 150 FF 1/2" XS LF2 CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -24a ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED ACC. ASTM E709 :SEE REPORT No: 055/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,180	0,210	1,010	0,010	0,013	0,180	0,080	0,020	0,023	0,200	0,002	0,001	0,009
PRODUCT ANALYSIS	0,183	0,216	1,002	0,007	0,009	0,186	0,071	0,018	0,021	0,193	0,003	0,003	0,006
	Al								CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,029								0,407	0,348	0,482	0,200	--
PRODUCT ANALYSIS	0,034								0,409	0,350	0,471	0,204	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta C10 Test specimen		Forma C10 Shape	°C C03	Snervamento>0,2% C11 Yield Strength>0,2%	Snervamento>1,0% C11 Yield Strength>1,0%	Rottura C12 Tensile	Allungamento C13 Elongation	Contrazione C14 Reduction of area
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
126,60	50,80	1	20	339,0	--	536,0	28,4	62,8

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST					
HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
153,0 ; 157,0	KV	10x10x55 mm	-46	38	42	53	44,3

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2017		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; FF FINISHING 125-250 µin AARH		

Marcatura in acc. / Marking in acc. to B06	ANSI/MSS SP-25-2018	Vis. & Dim. D01	SATISFACTORY	Origine / Origin of Steel B16	ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D. Gaffuri		MFF

MIM30800 del 29/08/2023

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 60 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: FLW0CS22230H00
Flange WN ASME B16.5 150LB FF FRG ASTM/ASME A/SA350 Gr.LF2 1/2" thk 3.73mm

raccortubi Heat num. or Pcs. marking: 22/75635 - Qty:2,00

Protocol: CTCERC202400009192 * CERTIFICATE COPY * Issued 23-10-2024

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	055/2024	Date	27/09/2024	Customer	RACCORTUBI S.P.A.	Order no.	6435
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Frigerio Simone	Note	

Procedure / Standard	ASTM E709	Acceptance	ASME VIII DIV. 1 APPENDIX 6

Temperature	20°C

Yoke Type	Type and Trade Equipment				Magnetic Particles Type	
AC/DC	Silver Yoke NDT Italiana Serial no. 1822	X	Y-2 Yoke Magnaflux Serial no. E3313		Wet Fluorescent Magnetic Particles: NDT Italiana Elite FW1	Illumination Type: Led UV Lamp Magnaflux Serial no. E3512
Note						

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined %	Results C[1]	Results NC[1]	Note
1	001	WN 150 FF 1/2" XS	22/75635	2	WHOLE ACCESSIBLE SURFACE	100	X		No indications detected
2	002	WN 150 FF 3/4" XS	22/70335	2	WHOLE ACCESSIBLE SURFACE	100	X		No indications detected

Note	Flanges bores and other surfaces were magnetic particle inspected in both directions, axial & circumferential in accordance with ASTM A275/A508 .				
Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfarltaly.com	Customer Inspector	

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 60 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: FLW0CS22230H00
Flange WN ASME B16.5 150LB FF FRG ASTM/ASME A/SA350 Gr.LF2 1/2" thk 3.73mm

raccortubi Heat num. or Pcs. marking: 22/75635 - Qty:2,00

Protocol: CTCERC202400009192 * CERT 825/996 * ISSUE COPY
* Issued 23-10-2024

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV	METALFAR PRODOTTI INDUSTRIALI SPA A01 23861 CESANA BRIANZA (LC) - ITALY VIA G. PARINI, 28 PHONE + 39 031 655441 - FAX +39 031 655149 certificate@metalfaritaly.com	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV

INSPECTION CERTIFICATE EN 10204:2004 / 3.1 A02 — **Nr** A03 2024-C_MFF-02265 — **Data / Dated** 01.10.2024 Z02

RACCORTUBI S.P.A. A06 Viale Lidice 38/40/42 10095 GRUGLIASCO TO IT	**Ordine / PO**	6435 A07
	Item	002 A07
	DDT / Delivery note	2024-3E301-0002216 A10
	Packing List	A11
	Fattura / Invoice	A12
	Ns. rif. / Our ref.	2024-3E201-0001413-0002 A08

Dest. RACCORTUBI SPA A06
VIA F.LLI KENNEDY, 59
20010 MARCALLO CON CASONE MI IT

Cod. colata / Heat Code B07	Nr. colata / Heat Nr B07	Quantità / Quantity B08	Descrizione / Description B01 - (B09 - B11)
	23/70335	2,00	WN 150 FF 3/4" XS LF2 CL1

Mat. in acc. a / Mat. in acc. to B02 ASTM A 350M -24a ,ASME SA 350 M - 23 ,ASME CODE SECT. II, PART A, ED. 2023
ASTM A350 LF2 CL1
NACE MR-0175/2021 ISO 15156-2 :2020
NACE MR-0103/2015 ISO 17945 :2015
Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.2014/68/EU(PED) ANNEX I,PARAGRAPH 4.3
& PRESSURE EQUIPMENT(SAFETY) REGULATION 2016 No.1105 SCHEDULE 2, PART 4 PARA.31

Ann. mat. / Mat. remarks D02-B03 FULLY KILLED STEEL AND FINE GRAIN PRACTICED
MT 100% PERFORMED ACC. ASTM E709 :SEE REPORT No: 055/2024

Elementi / Elements (C71 - C92)	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,180	0,230	1,000	0,009	0,012	0,140	0,110	0,020	0,019	0,200	0,002	0,002	0,010
PRODUCT ANALYSIS	0,182	0,235	1,002	0,010	0,009	0,144	0,106	0,018	0,020	0,196	0,003	0,002	0,011

	Al	CE LF	CE SF	F1	F2	PREN
LADLE ANALYSIS	0,026	0,400	0,347	0,472	0,160	--
PRODUCT ANALYSIS	0,025	0,402	0,349	0,467	0,162	--

CE LF=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE SF=C+(Mn/6) F1=Cu+Ni+Cr+Mo+V F2=Cr+Mo

Provetta / Test specimen C10		Forma / Shape C10	°C C03	Snervamento>0,2% / Yield Strength>0,2% C11	Snervamento>1,0% / Yield Strength>1,0% C11	Rottura / Tensile C12	Allungamento / Elongation C13	Contrazione / Reduction of area C14
Sez/Sect mm2	Gauge L.mm	1=O - 2=□		MPa	MPa	MPa	%	%
126,60	50,80	1	20	350,0	--	545,0	30,3	65,4

DUREZZA / HARDNESS C30		RESILIENZA / IMPACT TEST					
HBW C31	Tipo/Type C40	Provetta / Test Specimen C41	°C C03	1-Joule C42	2-Joule C42	3-Joule C42	Media/Average C43
160,0 ; 163,0	KV	10x10x55 mm	-46	52	35	72	53,0

Tratt. Term. / Heat treatment B04	NORMALIZED AT 930 °C - COOLED IN STILL AIR	C70	GAS FURNACE
Dim in acc. a / Dim. acc. to B14	ASME/ANSI B16.5 -2017		
Finitura / Roughness B15	ASME/ANSI B46.1 -2019 ; FF FINISHING 125-250 µin AARH		

Marcatura in acc. / Marking in acc. to B06		D01		Origine / Origin of Steel B16	
	ANSI/MSS SP-25-2018	Vis. & Dim.	SATISFACTORY		ITALY EUROPEAN UNION

Note / Notes Z01-B03 MATERIAL 100% MANUFACTURED IN ITALY; MATERIAL IN ACCORDANCE WITH ORDER AND SPECIFICATION Issued in agreement with TÜV SÜD Industrie Service GmbH August 12th, 2021" .
Certification no.DGR-0036-QS-W 1025/2021/MUC-01
TENSILE TEST AND CHARPY KV IMPACT TEST PERFORMED IN ACCORDANCE WITH ASTM A370 -22.

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTMENT A05	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY Z03	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL A04
D. Gaffuri		MFF

MIM30800 del 29/08/2023

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 70 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: FLW0CS22243Q00
Flange WN ASME B16.5 150LB FF FRG ASTM/ASME A/SA350 Gr.LF2 3/4" 3,91mm

raccortubi Heat num. or Pcs. marking: 23/70335 - Qty:2,00

Protocol: CTCERC202400009192 * CERTIFIED TRUE COPY * Issued 23-10-2024

A FARINA COMPANY

CERTIFICATO ESAME MAGNETICO

MIM22800 REV.00
27/02/2023

QAM
Luca Frigerio

Certificate no.	055/2024	Date	27/09/2024	Customer	RACCORTUBI S.P.A.	Order no.	6435
Material	ASTM A350 LF2CL1	Surface Condition	Machined	Operator	Frigerio Simone	Note	

Procedure / Standard	ASTM E709	Acceptance	ASME VIII DIV. 1 APPENDIX 6

Temperature	20°C

Yoke Type	Type and Trade Equipment				Magnetic Particles Type	
AC/DC	Silver Yoke NDT Italiana Serial no. 1822	X	Y-2 Yoke Magnaflux Serial no. E3313		Wet Fluorescent Magnetic Particles: NDT Italiana Elite FW1	Illumination Type: Led UV Lamp Magnaflux Serial no. E3512
Note						

No.	P.O. Item	Product	Heat	Quantity	Examined Part	Examined %	Results C[1]	Results NC[1]	Note
1	001	WN 150 FF 1/2" XS	22/75635	2	WHOLE ACCESSIBLE SURFACE	100	X		No indications detected
2	002	WN 150 FF 3/4" XS	22/70335	2	WHOLE ACCESSIBLE SURFACE	100	X		No indications detected

Note	Flanges bores and other surfaces were magnetic particle inspected in both directions, axial & circumferential in accordance with ASTM A275/A508 .				
Operator Signature		Approved by	Metalfar Prodotti Industriali S.p.A. Mr. Simone Frigerio Quality Control Manager NDE Level II ISO 9712 e-mail: qcm@metalfarltaly.com	Customer Inspector	

1: C = Compilant - NC = Non Compilant

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 70 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: FLW0CS22243Q00
Flange WN ASME B16.5 150LB FF FRG ASTM/ASME A/SA350 Gr.LF2 3/4" 3,91mm

raccortubi Heat num. or Pcs. marking: 23/70335 - Qty:2,00

Protocol: CTCERC202400009192 * CERTIFIED TRUE COPY * Issued 23-10-2024

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

IRC SPA FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	8055-P5	19/09/2024
Purchaser	030206018013 - RACCORTUBI SPA	
Order	00006433	

	Item	Quantity	Heat id.
5	R.E. 4" x 1.1/2" XS WPL6	1,00	513131

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Nb%
0,160	0,610	0,220	0,026	0,012	0,018	0,012	0,005	0,021	0,002	0,0020

CE_{IIW} 0,27

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	298	515	34

Impact Test

Direction L **Test Temperature** -46 °C **Test Type** KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
7.5 X 10	0,6	Base Mat.	119	126	128	124

Hardness Test

Base Metal **Avg** 140 HBW

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature
This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 130 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: REE0CS1728041H
RID. ECC. 4"x1.1/2" STD/XS SEAMLESS

EITI - The Inspection Body

qualytube

EITI S.r.l. - Qualytube Division
Via Pietro Palmieri 29, 10138 Torino
Via Enrico Berlinguer 4, 20060 Pozzo d'Adda (MI)

MagneticTest Report

Test Report
Rapporto di Prova
Prüfbericht
Rapport d'essai

Report No. - Rapporto N°
Berichten Nr. - Rapport N° : MT24033

Date - Data - Vom - date : 20/09/2024

Customer - Cliente - Besteller - Acheteur 1)
RACCORTUBI

Customer - Cliente - Besteller - Acheteur 2)

Order No. - Ordine N° - Bestell-Nr. - Commande N°
No. 82

Performed Test
100% MAGNETIC TEST ON ACCESSIBLE SURFACE

Material Description- Descrizione del Materiale
Gegenstand - Dèsignation du Produit
see table below

According to	EN 10246-12 ASTM E709 - ASME VIII Division 1 App.6/8
According to	ASTM SA960 SUPPLEMENTARY S53
Particles Description	MG ICRI G182 batch. No. 2015 04 H2
Inspection conditions	BLACK UV LIGHT - 1000 µW/cm2 min.
Pie gauge	ASME

Test	Electromagnetic joke
Particles type	fluorescent
Joke	AC - Magnafulx
Calibration block	ASME 4,5 Kg

Result - Esito
Ergebnis - Résultat
SATISFACTORY
NO REPORTABLE INDICATIONS HAVE BEEN FOUND

ITEM	DIAMETER (NPS) THICKNESS (mm)	STANDARD / GRADE	HEAT	No.		NOTE
1	1.1/2" sch. XS	CAPS ASME/ASTM SA/A 420 WPL6	16I-16I2373	1		
5	4"x1.1/2" STD/XS	RID. ECC. ASME/ASTM SA/A 420 WPL6	513131	1		
2	1.1/2" XS	TEE UG. ASME/ASTM SA/A 420 WPL6	0D-0D1533	1		
3	1.1/2"x3/4" XS	TEE RID. ASME/ASTM SA/A 420 WPL6	14E-14E5482-J5L3682	1		
4	1.1/2"x1" XS	TEE RID. ASME/ASTM SA/A 420 WPL6	54-J9KA054	3		

issued by **Verified by** **Customer**

Qualytube
Nicolò Tutani - NDT Specialist
ISO 9712 CICPND 26046/PND/C Level 2 UT
ISO 9712 CICPND 27058/PND/C Level 2 PT
ISO 9712 CICPND 26229/PND/C Level 2 MT

EITI - European Institute of Technical Inspections
Dario Pasqualini
Technical Director
ISO 9712 Level 3 – UT/PT/VT/RT

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 130 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: REE0CS1728041H
RID. ECC. 4"x1.1/2" STD/XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 513131 - Qty:1,00

Protocol: CTCERC202400009192 * CERTIFIED TRUE COPY
* Issued 23-10-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724001828	123A90A	Q012400892

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

24.10.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 09/10/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00008991
Packing list	PLPLIS202400008938
Ns. Rif.	00003948
Vs. Rif.	1724001828 - 12.09.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00008991

09/10/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00003948

Ordine N. P.O. number: 1724001828 - 12.09.24

123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*	Immagine *Image*
110	6.99	PIPESD02860200 60.33x2.77 SEAMLESS	59769	CTCERT202400001808_1.0001.TIF CTCERT202400001808_1.0002.TIF CTCERT202400001808_1.0003.TIF CTCERT202400001808_1.0004.TIF CTCERT202400001808_1.0005.TIF CTCERT202400001808_1.0006.TIF CTCERT202400001808_2.0001.TIF

raccortubi

00008991

09/10/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 09/10/2024

Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				TUBI SMLS SEC. ASTM ASTM/ASME A/SA-790 S32760 DIMS. SEC. ANSI B36.19	
110	M	6.99	1.00	PIPESD02860200 60.33x2.77 SEAMLESS	59769

raccortubi

00008991

09/10/2024

POSITIVE MATERIAL IDENTIFICATION

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Il materiale sottoelencato e' stato sottoposto con esito favorevole al controllo P.M.I tramite apparecchiatura NITON XLT898 secondo specifica PO 40 REV.8.

The under listed material have been satisfactory passed the P.M.I. test carried out with instruments NITON XLT898 in accordance with specification PO 40 REV.8.

Note:
Notes: P.M.I. extension 100%

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Raccortubi S.p.A.

Pos. *Item*	**Q.ta'** *Q.ty*	**U.M.**	**Descrizione** *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
			TUBI SMLS SEC. ASTM ASTM/ASME A/SA-790 S32760 DIMS. SEC. ANSI B36.19	
110	6.99	M	PIPESD02860200 60.33x2.77 SEAMLESS	59769

TTI
TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RÉCEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 749303 Page: 1 / 6	Rev:
Created on: Date: 13.12.2023	Modified on: 29.12.2023

TTI - TUBACEX TUBOS INOXIDABLES

Registro Mercantil de Alava, Tomo 587, Folio 189, Hoja VI 2885 - N.I.F. A-01140227

Tres cruces, 8
01400 Llodio (Alava)
SPAIN

TL: 946721350
FAX: 946725062
E-MAIL:

CUSTOMER DESCRIPTION/DESCRIPCIÓN DEL CLIENTE/KUNDENBEZEICHNUNG/COMMETTANT

CLIENT SOLD TO/SOLICITANTE/AUFTRAGGEBER/COMMETTANT

TSS
TUBACEX SERVICE SOLUTIONS, S.A.U
POLIGONO INDUSTRIAL SARATXO
01470 AMURRIO

SOLD TO:RACCORTUBI S.P.A.
SOLD P.O. REF.:00000291 S
SOLD ORDER REF.:392648
COPY NUMBER: 002

CLIENT ORDER/PEDIDO CLIENTE/KUNDEN AUFTRAGSNUMMER/NO.DE COMMANDE: I010738

SALES ORDER/PEDIDO VENTAS/AUFTRAGSNUMMER/NO.DE COMMANDE D'USINE:

AENOR ER Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order#s requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

TUBACEX TUBOS INOXIDABLES S.A.U.
Quality & Environment Director

Aitor Gonzalez Arco

TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate. TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 110 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: PIPESD02860200
60.33x2.77 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59769 - Qty:6,99

Protocol: CTCERC202400008991 * CERTIFIED TRUE COPY
* Issued 09-10-2024

TTI TUBACEX GROUP

INSPECTION CERTIFICATE
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EN 10204:2004 / 3.1

Number: 749303 Page: 2 / 6	Rev:
Created on: Date: 13.12.2023	Modified on: 29.12.2023

MATERIAL:SEAML. STAINL. STEEL TUBES/PIPES/TUBOS INOXIDABLES SIN SOLDADURA/TUBES INOX SANS SOUDURE/NAHTLOSE EDELSTAHLROHRE
HEAT-TREATED, PICKLED / TRATADO, DECAPADO / HYPERTREMPE, DECAPE / WÄRMEBEHANDELT, GEBEIZT, PASSIVATED AS PER ASTM A380 / PASIVADO SEGUN ASTM A380 / PASSIVÉ (ASTM A380) / PASSIVIERT (ASTM A380)
GRADE / ACERO / GRADE / WERKSTOFF: S32760,1.4501,
STANDARD / NORMA / STANDARD / LIEFERUNG NACH: ASME SECT.II PART.A SA790/SA790M-2021 ED.
ASTM A790/A790M-22
EN 10216-5:2021 TC2
EN 10297-2:2005
NORSOK M650 QTR N.2
NORSOK M630:2020 MDS D51 REV.6
CHECK ANALYSIS
CORROSION TESTED ACC. TO ASTM A262 PRACTICE E
CORROSION TESTED ACC. TO ASTM A923 TEST METHOD C
CORROSION TESTED ACC. TO ASTM G48 TEST METHOD A
CORROSION TESTED ACC. TO EN ISO 3651-2 PRACTICE B
SHELL ES/247 REV.2 EXCEPT DPI (TABLE 1) AND SURFACE REQUIREMENTS (POINT 9.1)
HYDROTEST
ANSI/NACE MR0103/ISO 17945:2015
ANSI/NACE MR0175/ISO15156-3:2015
QAD 68 REV.0
RTX_D51S REV.6
SHELL MESC SPE 74/014 FEBRUARY 2021 EXCEPT:
NO LIQUID PENETRANT TEST (POINT 14.12.1),
TENSILE TEST ONLY IN LONGITUDINAL DIRECTION.
ULTRASONIC TEST ONLY FOR LONGITUDINAL DEFECTS.
IMPACT TEST (if applicable): Lateral expansion 0.38 mm. minimum.
ULTRASONIC TEST ACC. TO ASTM A999/A999M / ASTM E213
TOLERANCES / TOLERANCIAS / TOLERANCES / TOLERANZEN NACH: ASME SECT.II PART.A SA999/SA999M-2021 ED.
ASTM A999/A999M-18
EN ISO 1127/03.2019 D3/T3
RANDOM LENGTHS / LARGOS VARIABLES / LONGUEUR COURANTE / EINGEENGTE LÄNGE 6.000/7.000 MM
PLAIN ENDS / LISOS / EXTRÉMITÉ D'EQUERRE / GLATTE ENDEN,
DIMENSIONS/DIMENSIONES/DIMENSIONS/DIMENSIONS: 60,33 X 2,77 MM - 2" SCH 10S
COLD FINISHED/LAMINADOS EN FRIO/KALTGEFORMT/LAMINES A FROID

Sales Item / Pos Ped. / AuftrgPos / Usine Pos	Client Item / Pos Clnt / Kunde Pos / Com. Pos	Delivery No / Nº Entrega / Lieferung / Avis. d'exp	Lot No. / Nº lote / Los Nr. / Lot d`inspection	Heat No / Colada / Schmelze / Coulée	Pieces / Piezas / Stück / Pcs	Weight / Peso / Gewicht / Poids	Tot Lgth / Long. Tot / Gesamtlänge / Tolength	Un Lgth / Long. Un / Längentyp / Long. Un
10		8110078916	P2305072	59769	15	395 KG	100,76 M	6000-7000 MM

RAW MATERIAL/DATOS MATERIAL/VORMATERIAL/MATIERE PREMIERE

Heat Nr:	Supplier	Method
59769	ACERALAVA (SPAIN)	Electric furnace+AOD

AENOR Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

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TUBACEX TUBOS INOXIDABLES S.A.U.
Quality & Environment Director

Aitor Gonzalez Arco

TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate. TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 110 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: PIPESD02860200
60.33x2.77 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59769 - Qty:6,99

Protocol: CTCERC202400008991 * CERTIFIED TRUE COPY
* Issued 09-10-2024

TTI TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RECEPTION
ABNAHMEPRUFZEUGNIS
EN 10204:2004 / 3.1

Number: 749303 Page: 3 / 6	Rev:
Created on: Date: 13.12.2023	Modified on: 29.12.2023

CHEMICAL COMPOSITION (%)/COMPOSICIÓN QUÍMICA (%)/CHEMISCHE ZUSAMMENSETZUNG (%)/COMPOSITION CHIMIQUE(%)

*L: Ladle C:Products

*	Heat	Seq	C	Mn	Si	P	S	Ni	Cr	Mo	Al	Cu
L	59769	1	0,013	0,66	0,510	0,025	0,0005	6,95	25,58	3,62	0,014	0,66
C	59769	9	0,013	0,68	0,540	0,025	0,0005	6,75	25,20	3,70	0,013	0,64
C	59769	10	0,013	0,67	0,540	0,025	0,0003	6,80	25,30	3,65	0,013	0,65

*	Heat	Seq	V	Nb	W	Co	N	Pren
L	59769	1	0,058	0,008	0,600	0,065	0,2385	41,3420
C	59769	9	0,067	0,005	0,590	0,065	0,2385	41,2260
C	59769	10	0,066	0,005	0,590	0,065	0,2385	41,1610

HEAT TREATMENT/TRATAMIENTO TÉRMICO/WÄRMEBEHANDLUNG/TRAITEMENT THERMIQUE

HIPERTEMPLADOS A 1100 °C , 5 min , Agua
SOLUTION ANNEALED AT 1100 °C , 5 min , WATER
HYPERTREMPES 1100 °C , 5 min , L' EAU
LOESUNGSGEGLUEHT 1100 °C , 5 min , Wasser

TENSILE TEST/TEST DE TENSIÓN/ESSAI TRACTION/ZUGVERSUCH

Lot No.	Sample	T	Rp0.2	Rp1.0	Rm	A2"	A5	Type	Spc.Type	Spc.Dim
		°C	*MPa*	*MPa*	*MPa*	*%*	*%*			*mm*
P2305072	1	20	628	698	828	30	30	L	S	20,10
	2	20	620	693	828	30	30	L	S	20,13

CORROSION ACCORDING TO ASTM A923 C/CORROSION DE ACUERDO ASTM A923 C/CORROSION SUIVANT ASTM A923 C/CORROSION ACCORDING TO ASTM A923 C

Lot No.	Sample	T	Pits-20x	Wloss	time
		°C		*MDD*	*Horas*
P2305072	1	50	N	1,0100	24,0

Corrosion test ASTM G48 practice A/Corrosión ASTM G48 práctica A/TEST DE CORROSION ASTM G48 practice A/LOCHFRASSTEST ASTM G 48 PR.A

Lot No.	Sample	T	Pits-20x	W.loss	time
		°C		*g/m2*	*Horas*
P2305072	1	50	N	0,1010	24,0

HARDNESS TEST/TEST DE DUREZA/DUREE/HÄRTEPRÜFUNG

Lot No.	Sample	0°Ext1	0°Ext2	0°Ext3	0°Int1	0°Int2	0°Int3	90°Ext1	90°Ext2	90°Ext3	90°Int1	90°Int2	90°Int3	180°Ext1
		HRC	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*
P2305072	1	19,2	18,7	17,9	16,2	15,5	16,0	18,0	19,1	18,4	17,2	18,1	16,9	19,6

Lot No.	Sample	180°Ext 2	180°Ext3	180°Int1	180°Int2	180°Int3	270°Ext1	270°Ext2	270°Ext3	270°Int1	270°Int2	270°Int3
		HRC	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*	*HRC*
P2305072	1	18,2	19,7	16,4	17,3	18,4	17,8	17,6	18,6	17,8	16,8	19,0

AENOR Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

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TUBACEX TUBOS INOXIDABLES S.A.U.
Quality & Environment Director

Aitor Gonzalez Arco

TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate. TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 110 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: PIPESD02860200
60.33x2.77 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59769 - Qty:6,99

Protocol: CTCERC202400008991 * CERTIFIED TRUE COPY
* Issued 09-10-2024

TTI TUBACEX GROUP

INSPECTION CERTIFICATE
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EN 10204:2004 / 3.1

Number: 749303 Page: 4 / 6	Rev:
Created on: Date: 13.12.2023	Modified on: 29.12.2023

FERRITE ACCORDING TO ASTM E 562/Contenido de Ferrita según ASTM E562/FERRITE SUIVANT ASTM E562/FERRIT ENTSPRECHEND ASTM E562

Lot No.	Sample	%Fer	Dev.Ferr
		%	%
P2305072	1	51,66	1,51

METALURGICAL TESTS/ENSAYOS METALÚRGICOS/METALLURGISCHE PRÜFUNGEN/ESSAIS METALLURGIQUES

ETCH STRUCTURE ACC. ASTM A923 MET.A: UNAFFECTED STRUCTURE. MATERIAL FREE FROM INTERMETALLIC PHASES AND PRECIPITATES. UNIFORM STRUCTURE ACROSS FULL WALL THICKNESS
EXAMEN DE MICROESTRUCUTRA DE ACUERDO A ASTM A923 MET.A: ESTRUCTURA NO AFECTADA. MATERIAL LIBRE DE FASES INTERMETALICAS Y PRECIPITADOS. ESTRUCTURA UNIFORME A TRAVES DEL ESPESOR.
ETCH STRUCTURE ACC. ASTM A923 MET.A: UNAFFECTED STRUCTURE. MATERIAL FREE FROM INTERMETALLIC PHASES AND PRECIPITATES. UNIFORM STRUCTURE ACROSS FULL WALL THICKNESS

INTERGRANULAR CORROSION TEST ACC. TO ASTM A262 PRACT."E": SATISFACTORY
ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ASTM A262 PRACT.E: SATISFACTORIO
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND ASTM A262 PRACT.E: IN ORDNUNG
ESSAI DE CORR. INTERGR. SELON ASTM A262 PRACT.E:SATISFAISANT
INTERGRANULAR CORROSION TEST ACC.TO DIN EN ISO 3651-2 MET.B: SATISFACTORY
ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ISO 3651-2 MET.B: SATISFACTORIO
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND ISO 3651-2 MET."B": IN ORDNUNG
ESSAI DE CORR. INTERGR. SELON ASTM ISO 3651-2 MET."B":SATISFAISANT

NON-DESTRUCTIVE TESTS/ENSAYOS NO DESTRUCTIVOS/ZERSTÖRUNGSFREIE PRÜFUNGEN/ESSAIS NON DESTRUCTIFS

FERRITE CONTENT DETERMINED BY FISCHER FERRITOSCOPE TO 100% OF PRODUCTS
CONTENIDO EN FERRITA MEDIDO CON FERRITOSCOPIO SOBRE EL 100% DEL MATERIAL.
Ferritescope-Test auf 100% des Materials.

100% ULTRASONIC TEST ACC. TO ASTM A999 / E213: SATISFACTORY
100% ENSAYO DE ULTRASONIDOS DE ACUERDO A ASTM A999 / E213: SATISFACTORIO
100% ULTRASCHALLPRÜFUNG NACH ASTM A999 / E.213:IN ORDNUNG
100% ESSAI D´ULTRASON D'ACCORD A ASTM A999 / E.213: SATISFAISANTE
POSITIVE MATERIAL IDENTIFICATION TEST ON EACH TUBE/PIPE BY "X-RAY-FLUORESCENCE-ANALYZER": SATISFACTORY
VERIFICACION DEL GRADO DE ACERO EN CADA TUBO MEDIANTE "ANALIZADOR DE FLUORESCENCIA DE RAYOS X": SATISFACTORIO

AENOR ER Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

TUBACEX TUBOS INOXIDABLES S.A.U.
Quality & Environment Director

Aitor Gonzalez Arco

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order#s requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate. TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 110 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: PIPESD02860200
60.33x2.77 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59769 - Qty:6,99

Protocol: CTCERC202400008991 * CERTIFICATE COPY
* Issued 09-10-2024

TTI TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RÉCEPTION
ABNAHMEPRÜFZEUGNIS
EN 10204:2004 / 3.1

Number: 749303 Page: 5 / 6	Rev:
Created on: Date: 13.12.2023	Modified on: 29.12.2023

VERWECHSLUNGSPRUEFUNG AN JEDEM ROHR MIT
"RÖNTGEN-FLUORESZENZ-ANALYSATOR": IN ORDNUNG
VERIFICATION DE LA NUANCE SUR CHAQUE TUBE PAR
"X-RAY-FLUORESCENCE-ANALYZER": SATISFAISANT

HYDROSTATIC PRESSURE TESTED AT 170 bar, 2500 PSI DURING 5 SEC ON EACH TUBE/PIPE: SATISFACTORY
ENSAYO HIDROSTÁTICO A 170 bar, 2500 PSI DURANTE 5 SEC EN CADA TUBO: SATISFACTORIO
WASSERDRUCKPRÜFUNG BEI 170 bar, 2500 PSI HALTEZEIT 5 SEC JE ROHR: IN ORDNUNG
ESSAI DE PRESSION HYDROSTATIQUE À 170 bar, 2500 PSI PENDANT 5 SEC SUR CHAQUE TUBE: SATISFAISANT
100% EDDY CURRENT TEST AT ASTM E426: SATISFACTORY
100% ENSAYO DE CORRIENTES INDUCIDAS DE ACUERDO A ASTM E426: SATISFACTORIO
100% WIRBELSTROM PRUEFUNG NACH ASTM E426: O.B.
100% CONTROLE COURANTS FOUCAULT D'APRES ASTM E426: BIEN

DIMENSIONAL CHECKING ON EACH TUBE: SATISFACTORY
INSPECCION DIMENSIONAL AL 100% DE LOS TUBOS SATISFACTORIA
100% MASSKONTROLLE: O.B.
VERIFICATION DIMENTIONNELLE AU 100% DES TUBES, SATISFAISANTE

VISUAL INSPECTION ON EACH TUBE: SATISFACTORY
INSPECCION VISUAL AL 100% DE LOS TUBOS, SATISFACTORIA
100% BESIGCHTIGUNG: O.B.
EXAMEN VISUEL AU 100% DES TUBES, SATISFAISANT

TECHNOLOGICAL TESTS/ENSAYOS TECNOLÓGICOS/TECHNOLOGISCHE PRÜFUNGEN/TECHNOLOGICAL TESTS

FLARING TEST: SATISFACTORY
ABOCARDADO S.NORMA: SATISFACTORIO
AUFWEITVERSUCH: IN ORDNUNG
ESSAI D'EVASEMENT: SATISFAISANT

FLATTENING TEST: SATISFACTORY
APLASTADO S.NORMA: SATISFACTORIO
RINGFALTVERSUCH: IN ORDNUNG
ESSAI D'APLATISSEMENT: SATISFAISANT

MARKING/ETIQUETADO/KENNZEICHNUNG/MARKSTEXT

TX2 TX1 TUBACEX 60,33 X 2,77 MM - 2" SCH 10S ASME SA790 ASTM A790 EN 10216-5 TC2 EN 10297-2 S32760 1.4501 CFD CD SMLS HEAT/ PMI-AV LOT NO/MADE IN SPAIN

AENOR Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

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TUBACEX TUBOS INOXIDABLES S.A.U.
Quality & Environment Director

Aitor Gonzalez Arco

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 110 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: PIPESD02860200
60.33x2.77 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59769 - Qty:6,99

Protocol: CTCERC202400008991 * CERTIFIED TRUE COPY
* Issued 09-10-2024

TTI TUBACEX GROUP

INSPECTION CERTIFICATE
CERTIFICADO DE INSPECCIÓN
CERTIFICAT DE RECEPTION
ABNAHMEPRUFZEUGNIS
EN 10204:2004 / 3.1

Number: 749303 Page: 6 / 6	Rev:
Created on: Date: 13.12.2023	Modified on: 29.12.2023

REMARKS/OBSERVACIONES/ANMERKUNG/REMARQUES

NO MERCURY, MERCURY COMPOUNDS OR MERCURY BEARING INSTRUMENTS AND/OR EQUIPMENT HAVE BEEN USED ALONG MANUFACTURING AND INSPECTION PROCESS.
DURANTE LOS PROCESOS DE FABRICACIÓN E INSPECCIÓN NO SE HA USADO MERCURIO NI INSTRUMENTOS Y/O EQUIPOS CONTENIENDO MERCURIO O CON COMPONENTES DE MERCURIO.
KEINE QUEKSILBER, BZW. QUECKSILBERVERUNREINIGTES KOMPONENTEN ODER KUGELLAGERINSTRUMENTE UND/ODER GERÄTE SIND BENUTZT WORDEN PRODUKTIONS UND BESICHTIGUNGSPROZESS.
IL N'A PAS ÉTÉ FAIT USAGE DE MERCURE, DE COMPOSÉS CONTENANT DU MERCURE OU DE MATÉRIAUX ET/OU D'INSTRUMENT CONTENANT DU MERCURE TOUT AU LONG DES ÉTAPES DE FABRICATION ET DU PROCESSUS D'INSPECTION ET DE CONTRÔLE.

NO WELDING OR WELD REPAIRS WERE MADE
SIN REPARACION POR SOLDADURA
KEINE SCHWEISSBEARBEITUNG WURDE VORGENOMMEN
SANS RÉPARATION AVEC SOUDURE
MATERIAL MANUFACTURER APPROVED BY TÜV SÜD Industrie Service GmbH
(NOTIFIED BODY 036)TO ISSUE CERTIFICATES OF SPECIFIC PRODUCT CONTROL IN
ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU ANNEX 1 POINT 4.3.
FABRICANTE DE MATERIALES APROBADO POR TÜV SÜD Industrie Service GmbH (ORGANISMO NOTIFICADO 0036) PARA LA EMISION DE CERTIFICADOS ESPECIFICOS DE CONTROL DE PRODUCTO DE ACUERDO AL ANEXO 1, PUNTO 4.3 DE LA DIRECTIVADE EQUIPOS A PRESION 2014/68/EU.
WERKSTOFFHERSTELLER MIT BERECHTIUNG ZUR AUSSTELLUNG VON BESCHEINIGUNGEN ÜBER SPEZIFISCHE PRÜFUNGEN AN DEN WERKSTOFFEN IM GELTUNGSBEREICH DER ZERTIFIZIERUNG UND IN ÜBEREINSTINSTIMMUNG MIT DER DRUCKGERÄTERICHTLINIE 2014/68/EU UND DEN ZUGRUNDE LIEGENDEN SPEZIFIKATIONEN ENTSPR. DER BENANNTEN STELLE NR.0036, TÜV SÜD Industrie Service GmbH
PRODUCTEUR DU MATERIEL APPROUVE PAR TÜV SÜD Industrie Service GmbH N.B. 0036) POUR EMISSION DES CERTIFICATS SPECIFIQUE DE CONTROLE DE PRODUIT SELON LA DIRECTIVE DES EQUIPES A PRESION 2014/68/EU ANNEXE 1 POINT 4.3.

MATERIAL CHARACTERISTICS COMPLY WITH POINT 7.5 OF ANNEX I TO PED BY HAVING AN ELONGATION AFTER RUPTURE AT TENSILE TEST NO LESS THAN 14% AND A BENDING RUPTURE ENERGY AT IMPACT TEST NO LESS THAN 27J AT 20ºC.
LAS CARACTERISTICAS DEL MATERIAL CUMPLEN CON LOS REQUISITOS DEL PUNTO 7.5 DE LA DIRECTIVA PED POR TENER UN ALARGAMIENTO TRAS ROTURA EN EL ENSAYO DE TRACCION NO INFERIOR AL 14% Y PO DE TRACCION NO INFERIOR AL 14% Y POR TENER UNA RESISTENCIA AL IMPACTO NO INFERIOR A 27 J A 20º C.
DIE WERKSTOFF-WERTE ENTSPRECHEN PUNKT 7.5. DER DGRL, ANHANG 1, MIT EINERBRUCHDEHNUNG = 14% IM NORMGEMÄSS DURCHGEFÜHRTEN ZUGVERSUCH UND DER KERBSCHLAGARBEIT = 27J AN EINER ISO - v PRO PROBE BEI EINER TEMPERATUR VON HÖCHSTENS 20ºC
LES CARACTERISTIQUES DU MATERIEL, AYANT UN ALLONGEMENT APRES RUPTURE A L'ESSAI DE TRACTION NON INFERIEUR DU 14% ET UNE RESISTENCE A LA FLEXION PAR CHOC A 20ºC NON INFERIEUR A 27J, SONT CONFORMES AUX PRESCIPTIONS DU PONT 7.5 DE L'ANNEXE I DE PED.

MATERIAL IS FREE OF RADIATION CONTAMINATION
EL MATERIAL ESTA LIBRE DE CONTAMINACION POR RADIACIONES
MATERIAL IS FREI VON RADIOAKTIVITÄT
MATÉRIEL LIBRE DE POLUTION RADIOACTIVE

AENOR ER Empresa Registrada UNE-EN ISO 9001

AENOR Gestión Ambiental UNE-EN ISO 14001

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TUBACEX TUBOS INOXIDABLES S.A.U.
Quality & Environment Director
Aitor Gonzalez Arco

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 110 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: PIPESD02860200
60.33x2.77 SEAMLESS

raccortubi Heat num. or Pcs. marking: 59769 - Qty:6,99

Protocol: CTCERC202400008991 * CERTIFIED TRUE COPY
* Issued 09-10-2024

TUBACEX GROUP

STRUCTURE EXAMINATION

MTC / Certificate
749303

MATERIAL IDENTIFICATION / IDENTIFICACIÓN DEL MATERIAL

Lot No. / Num Lote	**P2305072**	**Dimension** / Dimensión	60,33 x 2,77 mm - 2'SCH 10
Heat / Colada	59769	**Grado de acero** / Steel grade	S32760

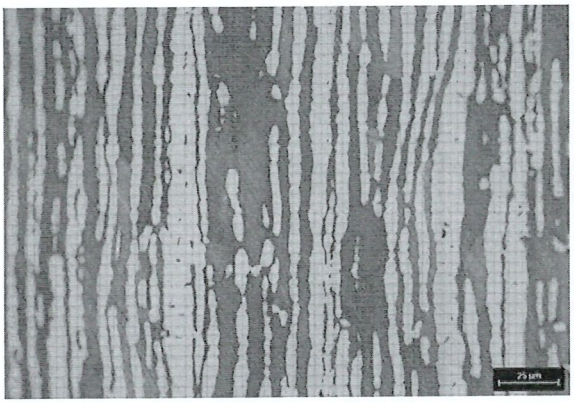
Type Of test / Tipo de Ensayo:	**MICROSTRUCTURE EVALUATION**

RESULTS / RESULTADO

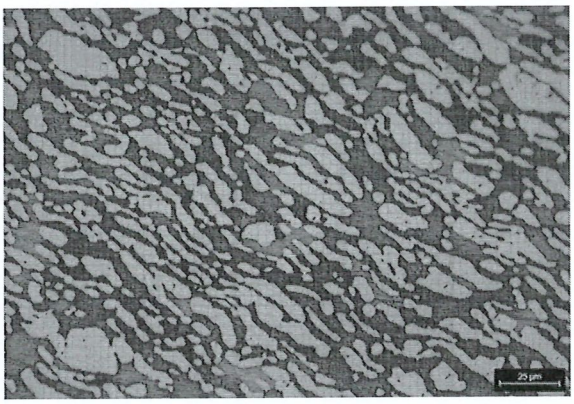
Result: The microestructure is formed by austenite and ferrite. The presence of intermetallic phases or precipitates is not observed. Uniform structure across full wall thickness Etching method according to ASTM E-407.

Resultado: la microestructura está compuesta por austenita y ferrita. No se observa la presencia de fases intermetálicas y precipitados. Estructura uniforme a través de todo el espesor. Método de ataque según ASTM E-407.

GRAPHICS RECORDS / REGISTROS FOTOGRÁFICOS:



Dir: LONGITUDINAL / MAG: 500X /



Dir: TRANSVERSAL / MAG: 500X /

Irene Castro
Responsable del Laboratorio
Laboratory Manager

POSITIVE MAT.L ID. S32760

Pagina / *Page:* 1

Cliente / *Customer*: ROSETTI MARINO

Commessa / *Job N.*: 3948

Pos. *Item*	N. Prog.	% CR	% Ni	% Mo	% Ti	% W	% Nb	% Cu	% N	% N. Colata / Marcatura Pz *Heat N./PCS Marking*
	Min.	24,00	6,00	3,00						
	Max	26,00	8,00	4,00						
11	**1**	25,41	6,84	3,68						**59769**

Operatore Qualificato
Qualified Operator

Ente Terzo
Third Party Agency

Cliente
Customer

Raccortubi Q.A./Q.C.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724001828	123A90A	Q012400891

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 24.10.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 16/10/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00009589
Packing list	PLPLIS202400009528
Ns. Rif.	00003948
Vs. Rif.	1724001828 - 12.09.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards

raccortubi

raccortubi

00009589

16/10/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 16/10/2024

Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine

Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
50	NR	4	0.00	FLR0SS0034010H Flange Reducing ASME B16.5 THRD-F NPT 150LB RF FRG ASTM A182 Gr.F316/316L 1''x1/2''	292021

raccortubi

00009589

16/10/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00003948

Ordine N. P.O. number: 1724001828 - 12.09.24

123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
50	4	FLR0SS0034010H Flange Reducing ASME B16.5 THRD-F NPT 150LB RF FRG ASTM A182 Gr.F316/316L 1''x1/2''	292021 CTCERT202400006846_1.0001.TIF

HERTECANT
FLANGES

Tel.: +32 (0) 15 22 49 10

www.hertecantflanges.com

CERTIFICATE	No		Date	Your order	Our order
EN 10204 - 3.1	24704453-1	/	11/10/2024	00006434	68805

Buyer:	Requirements:	
RACCORTUBI S.p.A. VIALE DE GASPERI 194 20010 MARCALLO CON CASONE Italy	ASME B16.5 Rockwell HRC acc to NACE MR 01-75/01-03 - ISO15156 ASME SA 182 SECT II PART A ED 2021, YEAR ASTM 2021	

Grade:	Heat treatment:	Brand mark	Inspectors stamp
F316L/F316 ASTM A 182 / ASME SA 182	solution annealed at 1050 °C quenched in water	H S	P P

Marking: **Quantity:** 4

Heat + Prod.number / Description / Mark + Inspector stamp

292021 P95781 THREADED 1" x 1/2" CLASS 150 316L R.F. REDUCING

Mechanical properties:

	Rp 0,2 % [N/mm2]	Rp 1,0 [N/mm2]	Rm [N/mm2]	Elongation (4D) %	Elongation (5D) %	Reduction of area [%]	Impact test 20° [J]			Avg	Lateral expansion
TANG	305	353	582	52.7		64	166	160	185	170	2.28-2.23-2.26
	HARDNESS HB BRINELL 2.5/187.5 KG RESULTS:						155-165				

Chemical analysis (%) :

C	Si	Mn	P	S	Cr	Mo	Ni	Ti	N	Cu	Al
0.013	0.46	1.54	0.031	0.024	16.57	2.02	10.06		0.074		
B	Co	Nb	W	V	Ta	Fe					
	0.16										

Melting process / Producer	E+AOD/VALBRUNA

Inspection and gauge measurement:	100% PMI test:	IGC test :
No remarks	Result :No remarks	ASTM A262 Pract. E: No remarks

Certified acc. PED 2014/68/EU Annex 1, § 4.3 by certification Body -0036- of TÛV SÛD
Industrie Service GMBH - Certificate Nr. 286/2006/MUC
The product mentioned herein complies with the specification and customers requirements.
Materials are free from mercury. Country of origin of the flanges is Belgium.
Materials are free of radio-active contamination.

Works inspector:

QUALITY CONTROL DEPARTMENT

Vets

TERMS AND CONDITIONS OF SALES ON OUR WEBSITE

HERTECANT FLANGES N.V.

Lossing 22
2260 Heultje - Westerlo (Belgium)
BTW/VAT/TVA N° BE 0466 169 726

Tel.: +32 (0) 15 22 49 10
www.hertecantflanges.com

Bank Belgium:
ING Lummen
IBAN BE89 3630 8481 1685
SWIFT-code: BBRUBEBB

KBC Westerlo
IBAN BE34 7330 4069 7590
SWIFT-code: KREDBEBB

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 50 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: FLR0SS0034010H
Flange Reducing ASME B16.5 THRD-F NPT 150LB RF FRG ASTM A182 Gr.F316/316L 1"x1/2"

raccortubi Heat num. or Pcs. marking: 292021 - Qty:4,00

Protocol: CTCERC202400009589 * CERTIFIED TRUE COPY

SIDERTEST
mechanical chemical non destructive tests
Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant A: Strada della Barianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

PT 493 / 24

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864 L

Tipo di controllo/ Type of control *Esame con Liquidi Penetranti/ Liquid Penetrant Examination*
Luogo del Controllo/ Test Location: Str. Barianella, 1/B C.S.Giovanni (PC)

Cliente/ Customer	Subcliente/ Subcustomer	Commessa/ Job	Ordine/ Order
Raccortubi Spa Viale De Gasperi, 194 - 20010 - Marcallo con Casone (MI)	**ROSETTI MARINO SPA**	**00003948**	**1724001828 - 123A90A**

Doc. Cliente/ Client's doc.	*Doc. Sider Test/ Sider Test doc.*	*Norma Esecuzione/ Execution Standard*	*Accettabilità/ Acceptance Std*
	PO 04-003 PT Rev. 17 - IL 04-003-001 PT Rev. 05	**ASME BPVC.V-2023 Art. 6 and 24**	**ASTM E 165-23 - ASME BPVC.VIII.1-2023 App. 8**

Tecnica d'Esame/ Examination Technique	Light intensity (Lux)	Condizioni Superficiali/ Surface Condition	Area Esame/ Area Tested
Liquidi Penetranti Solubili in Acqua a Contrasto di Colore/ Water Washable Color Contrast Penetrant Examination (IIAe2)	**>= 1076**	**Materiale Finito/ Finished Material**	**100% accessible surfaces**

Pulizia/ Cleaning		*Penetrante/ Penetrant*		*Rimozione Penetrante/ Penetrant Removal*		*Asciugatura/ Drying*		*Rilevatore/ Developer*	
Tipo/ Type	**Solvent NITRO**	Applicazione/ Application	**Brush**	Tipo/ Type	**Water Sponging**	Tipo/ Type	**Clean rags**	Applicazione/ Application	**Spray**
Intervallo/ Interval (min)	5'	Tipo/ Type	**Red K71B2P**	Intervallo/ Interval (min)	5'	Intervallo/ Interval (min)	5'	Tipo/ Type	**White D112A**
		Bagno/ Batch	**230707P**					Bagno/ Batch	**240507W150s**
		Marca/ Trade Mark	**ELITE**					Marca/ Trade Mark	**ELITE**
		Tempo mi. di penetrazione/ Minimum Penetration Time	**10'**					Intervallo di interpretazione/ Final interpretation interval	**7' ÷ 60'**

Posizione/ Item	Qta/ Qty	Descrizione/ Description	Prova Nr./ Test Nr.	Materiale/ Material	Colata/ Heat
50	**4**	**FLANGE REDUCING 1" x 1/2" S.150 RF**	**1241**	**ASTM A 182 F316/F316L**	**292021**

Assenza di Difetti/ Absence of Defects

Conforme a 'Accettabilità'/ Conforming to 'Acceptance Std

Regola decisionale adottata per l'uso dell'incertezza di misura quando dichiara la conformità a un requisito specificato: per i controlli NDT il laboratorio monitora le sorgenti di incertezza, ma non la calcola. Non si riporta l'incertezza nel rapporto di prova. Il risultato può essere CONFORME o NON CONFORME/ Decision rule adopted for the use of measurement uncertainty when declaring compliance with a specified requirement: for NDT controls the laboratory monitors sources of uncertainty, but does not calculate it. The uncertainty is not reported in the test report. The result can be COMPLIANT or NON-COMPLIANT

Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento.I campi in blu sono forniti dal cliente.La conformità ai documenti in "Accettabilità" riguarda solamente le prove presenti in questo rapporto di prova.Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti./ This test report refers only to the examined sample as received from the Customer. Clients are in charge of sampling. Blue fields are supplied by the Client. Compliance with documents in "Acceptace Std" refers only to the tests described on this test report.Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.

Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Operatore CND Liv. II/ Lev. 2 NDE Operator
SIDER TEST S.r.l.
MAURIZIO ENDENI
LEVEL II SNT-TC-1A

Data Ingresso Materiale/ Date of Material Arrival	Data esecuzione/ Date of Testing	Data Rapporto di prova/ Test Report Date
17/10/2024	18/10/2024	18/10/2024

Cliente/ Customer	Ispettori/ Inspector

Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy
PAOLO AMANI
LEVEL 3
SNT-TC-1A - ISO 9712 - NUCLEAR - ASME BPVC
RT - PT

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD Industrie Service

ZERTIFIKAT

Die Notifizierte Stelle - Kennnummer 0036 -
der TÜV SÜD Industrie Service GmbH

bescheinigt, dass die Firma

Hertecant Flanges NV
Lossing 22
B-2260 Heultje-Westerlo

als Werkstoffhersteller für

gesenkgeschmiedete Flansche aus austenitischen und austenitisch-ferritischen Stählen

über ein zertifiziertes Qualitätsmanagementsystem
entsprechend Anhang I, Absatz 4.3 der Druckgeräterichtlinie 2014/68/EU,
AD 2000-Merkblatt W 0 sowie EN 764-5, Absatz 4.2

verfügt und dieses anwendet.

Der Geltungsbereich ist aus der Anlage ersichtlich.
Weitere Einzelheiten sind im Bericht Nr. P-B-20-11-720303228 genannt.

Das Unternehmen ist daher berechtigt, in Übereinstimmung mit der Druckgeräte-richtlinie 2014/68/EU Bescheinigungen über spezifische Prüfungen an den Werkstoffen im o.g. Geltungsbereich auszustellen. Eventuell weitergehende Anforderungen aus den angewandten technischen Spezifikationen zur Erfüllung des Anhanges I bleiben unberührt.

Das Zertifikat ist gültig bis Oktober 2023.

Zur Aufrechterhaltung der Gültigkeit ist ein jährliches Überwachungsaudit erforderlich.

Zertifikat-Nr.: DGR-0036-QS-W 286/2006/MUC-001
München, 8. März 2021

Notified Body, Nr. 0036

TÜV SÜD Industrie Service GmbH 00 36 Notified Body

(M. Strobel)

Zertifizierungsstelle
Werkstoff- und Schweißtechnik

EQ3101146

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD Industrie Service

CERTIFICATE

The Notified Body - 0036 -
of TÜV SÜD Industrie Service GmbH

certifies that

Hertecant Flanges NV
Lossing 22
B-2260 Heultje-Westerlo

has implemented, operates and maintains a

Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU, Annex I, Section 4.3, AD 2000-Merkblatt W 0 as well as EN 764-5, Para. 4.2

as a material manufacturer for the scope of

dye forged flanges in austenitic and austenitic-ferritic materials.

The scope of the approval is described in the annex to this certificate.
Further details are mentioned in report no. P-B-20-11-720303228.

The manufacturer is therefore authorized to issue certificates of specific product control within the scope of the assessed quality system and in accordance with the Pressure Equipment Directive 2014/68/EU. Possible additional requirements - specific to applied technical specifications to meet PED Annex I - are not affected.

This certificate is valid through October 2023.

In order to adhere the validity an annual surveillance audit is required.

Certificate No.: DGR-0036-QS-W 286/2006/MUC-001
Munich, March 8th, 2021

Notified Body, No. 0036

TÜV SÜD Industrie Service GmbH 00 36 Notified Body

(M. Strobel)

Certification Body
Material and Welding Technology

EQ3101146

Industrie Service

DECLARATION

I, the undersigned, Pieter Deleu, lead auditor by TÜV SÜD Industrie Service GmbH, in charge of the recertification process of the Company Hertecant Flanges N.V. attest that the plant Hertecant Flanges N.V. in 2260 Heultje -Westerlo (Belgium), has been in progress of the recertification process on date of 07/02/2024 following the Directive 2014/68/EU annex I § 4.3 and the recertification process for the AD 2000-W0 standard with the Notified Body TÜV SÜD Industrie Service GmbH, Westendstr. 199, D-80686 München.

The audit result was positive.

The Notified Body has been informed about the positive result. Then the new certificate and scope will be issued by the Notified Body as soon as possible.

Boortmeerbeek, 05/07/2024

Ing. P. Deleu
Lead auditor

TÜV SÜD Industrie Service GmbH
0036
Notified Body

TÜV SÜD Benelux BV, Leuvensesteenweg 350, B-3190 Boortmeerbeek
TEL.: +32- (0)15 50 96 30

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724001828	123A90A	Q012400971

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 15.11.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 08/11/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00009786
Packing list	PLPLIS202400009719
Ns. Rif.	00003948
Vs. Rif.	1724001828 - 12.09.24 123A90A - Base Load

DISTINTI SALUTI
Best Regards
raccortubi

raccortubi

00009786

08/11/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00003948

Ordine N. P.O. number: 1724001828 - 12.09.24

123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
90	2	GFL3GK13670H00 Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER 1/2"	6436 CTCERT202400006917_1.0001.TIF CTCERT202400006917_1.0002.TIF
100	1	GSW0GK1130UQ00 Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 1.1/4"	6436 CTCERT202400006915_1.0001.TIF CTCERT202400006915_1.0002.TIF CTCERT202400006915_1.0003.TIF CTCERT202400006915_1.0004.TIF
230	1	SPIKNN00570300 Insulation Kit diam.3" 150LB RF	6436 CTCERT202400006916_1.0001.TIF CTCERT202400006916_1.0002.TIF CTCERT202400006916_2.0001.TIF CTCERT202400006916_2.0002.TIF
240	2	SPIKNN01240H00 Insulation Kit diam.1/2" 150LB FF	6436 CTCERT202400006916_1.0001.TIF CTCERT202400006916_1.0002.TIF CTCERT202400006916_2.0001.TIF CTCERT202400006916_2.0002.TIF
250	2	SPIKNN01253Q00 Insulation Kit diam.3/4" 150LB FF	6436 CTCERT202400006916_1.0001.TIF CTCERT202400006916_1.0002.TIF CTCERT202400006916_2.0001.TIF CTCERT202400006916_2.0002.TIF

raccortubi

00009786

08/11/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 08/11/2024
Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
90	NR	2	0.00	GFL3GK13670H00 Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER 1/2''	6436
100	NR	1	0.00	GSW0GK1130UQ00 Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 1.1/4''	6436
230	NR	1	0.00	SPIKNN00570300 Insulation Kit diam.3" 150LB RF	6436
240	NR	2	0.00	SPIKNN01240H00 Insulation Kit diam.1/2" 150LB FF	6436
250	NR	2	0.00	SPIKNN01253Q00 Insulation Kit diam.3/4" 150LB FF	6436

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280-A
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

FLAT GASKET NBR RUBBER

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted.**
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
G.NE NBR 1/2" 150 SP.3MM FF DWG16 Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5952900
P.IVA 04138610271 • info@cfservice.srl

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 90 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: GFL3GK13670H00
Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER 1/2"

raccortubi Heat num. or Pcs. marking: 6436 - Qty:2,00

Protocol: CTCERC202400009786 * CERTIFICATE COPY
* Issued 08-11-2024

CF®
CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280-B
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 3.1

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

Spiral Wound Gasket 316L/FG/IR_316L/OR_CS

Material Designations:

ASTM:	**A240 Tp.316L**
EN No:	**1.4404**
DIN:	**X2 CrNiMo17-13-2**
OTHERS:	

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted.**
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
SWG 316L/FG/316L/CS 1"1/4 3/600 Code :	1,000

Quality Assurance:

CF SERVICE
CF SERVICE S.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.5683562 Fax 041.5952900
P.IVA/C.F. 04001020271 - info@cfservice.srl

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 100 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: GSW0GK1130UQ00
Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 1.1/4"

raccortubi Heat num. or Pcs. marking: 6436 - Qty:1,00

Protocol: CTCERC202400009786 * CERTIFICATE COPY
* Issued 08-11-2024

CF®
CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

A240 Tp.316L windings.

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	N%
max	0.030	2.00	0.045	0.015	1,00	18.00	14.00	2,50	0.10
min						16.00	10.00	2.00	
actual	0.024	1.26	0.035	0.002	0.43	16.71	10.04	2.03	0.027

Heat No: 339085

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yield strength Rp 0.2 MPa	Elongation 50mm %	Hardness HB
Min.485	Min.170	40	Max.160
615	265	52	138

Graphite filler

MECHANICAL PROPERTIES

ASTM F 152 N/mm²	ASTM C 695 N/mm²	ASTM F 36 %	Friction coeff ///
>4.5	170	>40	0.05 – 0.14

C (ASTM C 571) %	S (ASTM C 816) Ppm	Cl (ASTM D 512) ppm	F (ASTM D 3868) Ppm	Ash (ASTM C 561) %
>98	<1000	<50	<50	<0.5

Corrosion inhibitor: Zn <1%

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

A240 Tp.316L ring

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	N%
max	0.03	2.00	0.045	0.030	0.75	18.00	14.00	3.00	0.10
min						16.00	10.00	2.00	
actual	0.024	1.28	0.022	0.006	0.54	16.53	10.57	2.03	0.033

Heat No: 5464

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yeld strength Rp 0.2 MPa	Elongation 50mm %	Hardness HV
Min.485	Min.170	Min.40	Max.210
614	312	46	160

Carbon Steel type EN 10111:2006 DD12 outer ring

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%
max	0.10	0.45	0.024	0.035
min				
actual	0.08	0.384	0.010	0.010

Heat No: 380236

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yield strength Rp 0.2 MPa	Elongation 50mm %
Max.420	170 : 320	Min.30
409	308	32.4

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

INSULATION KIT

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted**.
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.5682900 Fax 041.5952900
P.IVA 04150610271 - info@cfservice.srl

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 230 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN00570300
Insulation Kit diam.3" 150LB RF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:1,00

Protocol: CTCERC202400009786 * CERTIFIED TRUE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
INSULATION KITS FLANGE TYPE F 3" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	1,000
INSULATION KIT FLANGE TYPE E 1/2" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	2,000
INSULATION KIT FLANGE TYPE E 3/4" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. (041) 4568562 Fax 041.5952900
P.IVA 04139610271 - info@cfservice.srl

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 230 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN00570300
Insulation Kit diam.3" 150LB RF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:1,00

Protocol: CTCERC202400009786 * CERTIFICATE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280-C
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

INS.GASKET CF3090

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted.**
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
INS.GASKET CF3090 3" 150 THK.3MM TYPE F Code :	1,000
INS.GASKET CF3090 1/2"150 THK.3MM TYPE E Code :	2,000
INS.GASKET CF3090 3/4 150 THK.3MM TYPE E Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5952900
P.IVA 04159610271 - info@cfservice.srl

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 230 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN00570300
Insulation Kit diam.3" 150LB RF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:1,00

Protocol: CTCERC202400009786 * CERTIFICATE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

INSULATION KIT

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

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The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted**.
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5952930
P.IVA 04158610271 - info@cfservice.srl

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
INSULATION KITS FLANGE TYPE F 3" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	1,000
INSULATION KIT FLANGE TYPE E 1/2" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	2,000
INSULATION KIT FLANGE TYPE E 3/4" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.5681562 Fax 041.5952900
P.IVA 04158610271 - info@cfservice.srl

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN01240H00
Insulation Kit diam.1/2" 150LB FF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:2,00

Protocol: CTCERC202400009786 * CERTIFIED TRUE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280-C
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

INS.GASKET CF3090

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted**.
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN01240H00
Insulation Kit diam.1/2" 150LB FF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:2,00

Protocol: CTCERC202400009786 * CERTIFICATE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
INS.GASKET CF3090 3" 150 THK.3MM TYPE F Code :	1,000
INS.GASKET CF3090 1/2"150 THK.3MM TYPE E Code :	2,000
INS.GASKET CF3090 3/4 150 THK.3MM TYPE E Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE S.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5952900
P.IVA 04136010271 - info@cfservice.biz

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN01240H00
Insulation Kit diam.1/2" 150LB FF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:2,00

Protocol: CTCERC202400009786 * CERTIFIED TRUE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

INSULATION KIT

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted**.
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
INSULATION KITS FLANGE TYPE F 3" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	1,000
INSULATION KIT FLANGE TYPE E 1/2" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	2,000
INSULATION KIT FLANGE TYPE E 3/4" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE S.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.5952900
P.IVA 04156610271 - info@cfservice.eu

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN01253Q00
Insulation Kit diam.3/4" 150LB FF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:2,00

Protocol: CTCERC202400009786 * CERTIFIED TRUE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280-C
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

INS.GASKET CF3090

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted**.
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5952900
P.IVA 04159010271 - info@cfservice.srl

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN01253Q00
Insulation Kit diam.3/4" 150LB FF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:2,00

Protocol: CTCERC202400009786 * CERTIFIED TRUE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
INS.GASKET CF3090 3" 150 THK.3MM TYPE F Code :	1,000
INS.GASKET CF3090 1/2"150 THK.3MM TYPE E Code :	2,000
INS.GASKET CF3090 3/4 150 THK.3MM TYPE E Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE S.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.5685687 Fax 041.5952900
P.IVA 04186010271 - info@cfservice.net

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724001828	123A90A	Q012400971

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 15.11.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 08/11/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00009786
Packing list	PLPLIS202400009719
Ns. Rif.	00003948
Vs. Rif.	1724001828 - 12.09.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards
raccortubi

raccortubi

00009786

08/11/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00003948

Ordine N. P.O. number: 1724001828 - 12.09.24

123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
90	2	GFL3GK13670H00 Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER 1/2"	6436 CTCERT202400006917_1.0001.TIF CTCERT202400006917_1.0002.TIF
100	1	GSW0GK1130UQ00 Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 1.1/4"	6436 CTCERT202400006915_1.0001.TIF CTCERT202400006915_1.0002.TIF CTCERT202400006915_1.0003.TIF CTCERT202400006915_1.0004.TIF
230	1	SPIKNN00570300 Insulation Kit diam.3" 150LB RF	6436 CTCERT202400006916_1.0001.TIF CTCERT202400006916_1.0002.TIF CTCERT202400006916_2.0001.TIF CTCERT202400006916_2.0002.TIF
240	2	SPIKNN01240H00 Insulation Kit diam.1/2" 150LB FF	6436 CTCERT202400006916_1.0001.TIF CTCERT202400006916_1.0002.TIF CTCERT202400006916_2.0001.TIF CTCERT202400006916_2.0002.TIF
250	2	SPIKNN01253Q00 Insulation Kit diam.3/4" 150LB FF	6436 CTCERT202400006916_1.0001.TIF CTCERT202400006916_1.0002.TIF CTCERT202400006916_2.0001.TIF CTCERT202400006916_2.0002.TIF

raccortubi

00009786

08/11/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 08/11/2024
Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
90	NR	2	0.00	GFL3GK13670H00 Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER 1/2''	6436
100	NR	1	0.00	GSW0GK1130UQ00 Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 1.1/4''	6436
230	NR	1	0.00	SPIKNN00570300 Insulation Kit diam.3" 150LB RF	6436
240	NR	2	0.00	SPIKNN01240H00 Insulation Kit diam.1/2" 150LB FF	6436
250	NR	2	0.00	SPIKNN01253Q00 Insulation Kit diam.3/4" 150LB FF	6436

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280-A
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

FLAT GASKET NBR RUBBER

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted.**
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 90 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: GFL3GK13670H00
Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER 1/2"

raccortubi Heat num. or Pcs. marking: 6436 - Qty:2,00

Protocol: CTCERC202400009786 * CERTIFICATE COPY * Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
G.NE NBR 1/2" 150 SP.3MM FF DWG16 Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5952900
P.IVA 04138610271 • info@cfservice.srl

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 90 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: GFL3GK13670H00
Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER 1/2"

raccortubi Heat num. or Pcs. marking: 6436 - Qty:2,00

Protocol: CTCERC202400009786 * CERTIFICATE COPY
* Issued 08-11-2024

CF®
CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280-B
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 3.1

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

Spiral Wound Gasket 316L/FG/IR_316L/OR_CS

Material Designations:

ASTM:	**A240 Tp.316L**
EN No:	**1.4404**
DIN:	**X2 CrNiMo17-13-2**
OTHERS:	

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted.**
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5952930
P.IVA 04186610271 - info@cfservice.srl

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
SWG 316L/FG/316L/CS 1"1/4 3/600 Code :	1,000

Quality Assurance:

CF SERVICE
CF SERVICE S.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.5683562 Fax 041.5952900
P.IVA/C.F. 04001020271 - info@cfservice.srl

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 100 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: GSW0GK1130UQ00
Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING 1.1/4"

raccortubi Heat num. or Pcs. marking: 6436 - Qty:1,00

Protocol: CTCERC202400009786 * CERTIFICATE COPY
* Issued 08-11-2024

CF®
CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

A240 Tp.316L windings.

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	N%
max	0.030	2.00	0.045	0.015	1,00	18.00	14.00	2,50	0.10
min						16.00	10.00	2.00	
actual	0.024	1.26	0.035	0.002	0.43	16.71	10.04	2.03	0.027

Heat No: 339085

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yield strength Rp 0.2 MPa	Elongation 50mm %	Hardness HB
Min.485	Min.170	40	Max.160
615	265	52	138

Graphite filler

MECHANICAL PROPERTIES

ASTM F 152 N/mm²	ASTM C 695 N/mm²	ASTM F 36 %	Friction coeff ///
>4.5	170	>40	0.05 – 0.14

C (ASTM C 571) %	S (ASTM C 816) Ppm	Cl (ASTM D 512) ppm	F (ASTM D 3868) Ppm	Ash (ASTM C 561) %
>98	<1000	<50	<50	<0.5

Corrosion inhibitor: Zn <1%

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

A240 Tp.316L ring

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	N%
max	0.03	2.00	0.045	0.030	0.75	18.00	14.00	3.00	0.10
min						16.00	10.00	2.00	
actual	0.024	1.28	0.022	0.006	0.54	16.53	10.57	2.03	0.033

Heat No: 5464

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yeld strength Rp 0.2 MPa	Elongation 50mm %	Hardness HV
Min.485	Min.170	Min.40	Max.210
614	312	46	160

Carbon Steel type EN 10111:2006 DD12 outer ring

CHEMICAL ANALISYS

Spec	C%	Mn%	P%	S%
max	0.10	0.45	0.024	0.035
min				
actual	0.08	0.384	0.010	0.010

Heat No: 380236

MECHANICAL PROPERTIES

Tensile strength Rm MPa	Yield strength Rp 0.2 MPa	Elongation 50mm %
Max.420	170 : 320	Min.30
409	308	32.4

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

INSULATION KIT

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
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The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted**.
Country of Origin of raw material: **European Community.**

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Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.5952900 Fax 041.5952900
P.IVA 04150610271 - info@cfservice.srl

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 230 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN00570300
Insulation Kit diam.3" 150LB RF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:1,00

Protocol: CTCERC202400009786 * CERTIFIED TRUE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
INSULATION KITS FLANGE TYPE F 3" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	1,000
INSULATION KIT FLANGE TYPE E 1/2" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	2,000
INSULATION KIT FLANGE TYPE E 3/4" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. (041) 4568562 Fax 041.5952900
P.IVA 04139610271 - info@cfservice.srl

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 230 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN00570300
Insulation Kit diam.3" 150LB RF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:1,00

Protocol: CTCERC202400009786 * CERTIFICATE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280-C
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

INS.GASKET CF3090

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted.**
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
INS.GASKET CF3090 3" 150 THK.3MM TYPE F Code :	1,000
INS.GASKET CF3090 1/2"150 THK.3MM TYPE E Code :	2,000
INS.GASKET CF3090 3/4 150 THK.3MM TYPE E Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5952900
P.IVA 04159610271 - info@cfservice.srl

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 230 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN00570300
Insulation Kit diam.3" 150LB RF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:1,00

Protocol: CTCERC202400009786 * CERTIFICATE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

INSULATION KIT

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted**.
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5952930
P.IVA 04158610271 - info@cfservice.vn.it

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
INSULATION KITS FLANGE TYPE F 3" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	1,000
INSULATION KIT FLANGE TYPE E 1/2" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	2,000
INSULATION KIT FLANGE TYPE E 3/4" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.5681562 Fax 041.5952900
P.IVA 04158610271 - info@cfservice.srl

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN01240H00
Insulation Kit diam.1/2" 150LB FF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:2,00

Protocol: CTCERC202400009786 * CERTIFIED TRUE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280-C
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

INS.GASKET CF3090

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted**.
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN01240H00
Insulation Kit diam.1/2" 150LB FF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:2,00

Protocol: CTCERC202400009786 * CERTIFICATE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
INS.GASKET CF3090 3" 150 THK.3MM TYPE F Code :	1,000
INS.GASKET CF3090 1/2"150 THK.3MM TYPE E Code :	2,000
INS.GASKET CF3090 3/4 150 THK.3MM TYPE E Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5952900
P.IVA 04156010271 - info@cfservice.it

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 240 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN01240H00
Insulation Kit diam.1/2" 150LB FF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:2,00

Protocol: CTCERC202400009786 * CERTIFIED TRUE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

INSULATION KIT

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted**.
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
INSULATION KITS FLANGE TYPE F 3" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	1,000
INSULATION KIT FLANGE TYPE E 1/2" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	2,000
INSULATION KIT FLANGE TYPE E 3/4" 150 KIT MADE BY N 1 G10 INSULATING SLEEVE FOR EACH BOLT N 2 G10 INSULATING WASHERS FOR EACH BOLT N 2 METALLIC ZPS WASHERS FOR EACH BOLT Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE S.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.5683847 Fax 041.5952900
P.IVA 04156610271 - info@cfservice.eu

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN01253Q00
Insulation Kit diam.3/4" 150LB FF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:2,00

Protocol: CTCERC202400009786 * CERTIFIED TRUE COPY
* Issued 08-11-2024

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

Material certificate No: 49202466324280-C
Invoice/ddt No: 4280
Invoice/ddt date: 18/10/2024

CERTIFICATE OF CONFORMITY EN 10204 2.2

Customer:
9012369
RACCORTUBI S.P.A.
Viale De Gasperi 194
20010 Marcallo con Casone
MI
IT

Customer references: Order No: **00006436**

Gasket description:

INS.GASKET CF3090

Material Designations:

ASTM:
EN No:
DIN:
OTHERS:

DECLARATION

We hereby certify that the above referenced good are brand new, manufactured with best checked at all stages for quality assurance purposes.
The goods were found to be compliant with current international quality Standards, as well as with End User quality requirements.
The goods were found to be compliant with quantity required, as well as with End User quality requirements.

Visual and dimensional checking: **accepted**.
Country of Origin of raw material: **European Community.**

The chemical and mechanical properties of the material supplied are in full compliance with **NACE MR-01-75 and NACE MR-01-03** (last edition).

We hereby, the undersigned Company declares that the products included in the above-mentioned delivery note are covered with a warranty of 18 months from date of delivery and 12 months from date of installation.

Our Management System is in compliance with EN ISO 9001:2015

Quality Assurance:

CF SERVICE
CF SERVICE s.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.4568562 Fax 041.5952900
P.IVA 04159010271 - info@cfservice.srl

CF SERVICE s.r.l unipersonale
Via del vetro, 13 – 30020 MARCON (VE)
Tel. +39 041.45 68 562

DESCRIPTION	QUANTITY
INS.GASKET CF3090 3" 150 THK.3MM TYPE F Code :	1,000
INS.GASKET CF3090 1/2"150 THK.3MM TYPE E Code :	2,000
INS.GASKET CF3090 3/4 150 THK.3MM TYPE E Code :	2,000

Quality Assurance:

CF SERVICE
CF SERVICE S.r.l. Unipersonale
Via del Vetro, 13 - 30020 MARCON (VE)
Tel. 041.5685687 Fax 041.5952900
P.IVA 04366010271 - info@cfservice.net

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 250 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SPIKNN01253Q00
Insulation Kit diam.3/4" 150LB FF

raccortubi Heat num. or Pcs. marking: 6436 - Qty:2,00

Protocol: CTCERC202400009786 * CERTIFIED TRUE COPY
* Issued 08-11-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724001828	123A90A	Q012400972

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

15.11.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 15/11/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00010482
Packing list	PLPLIS202400010407
Ns. Rif.	00003948
Vs. Rif.	1724001828 - 12.09.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards

raccortubi

Certificate

Quality management system for Manufacturer of Materials acc. to Directive 2014/68/EU

Certificate no.: 01 202 I/Q-04 1095

Name and address of the certificate holder:

PRESSBOLT S.r.l.
con unico socio
Via Dell'Artigianato, 12
22078 Turate CO
Italy

Herewith we certify that the material manufacturer has established and applies a Quality Management System. The system was audited according to the European Directive 2014/68/EU, Annex I, Par. 4.3, with regard to the materials as listed in the scope of approval.

Test basis: **QM System acc. to EN 764-5, article 4.2 and AD 2000-Merkblatt W0**

Audit report no.: 01 202 I/Q-04 1095

Scope: **Manufacture of stud bolts, valves components, special pieces according to customer's drawings, nuts and bolts for chemical, petrochemical, offshore and energy industries, see annex, 01.07.2022, Rev.: 4, to certificate**

Manufacturing plant: see certificate holder

Validity: **This certificate is valid until 2025-07-27.**

Cologne, 2022-07-18

Dipl.-Ing. (FH) Vera Ruff

TÜV Rheinland 0035 Notified Body

TÜV Rheinland Industrie Service GmbH
Notified Body for Pressure Equipment, ID-No. 0035
Am Grauen Stein, D-51105 Cologne

E-108a

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QuickSand disarmed file "CTCERC202400010482_LA.pdf"
QuickSand disarmed file "CTCERC202400010482_CONF.pdf"

raccortubi

00010482

15/11/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00003948

Ordine N. P.O. number: 1724001828 - 12.09.24

123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
140	4	SB20BO00650200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=85	F2329 CTCERT202400007547_1.0001.TIF CTCERT202400007547_1.0002.TIF
150	20	SB20BO00680300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=100	F2329 CTCERT202400007548_1.0001.TIF CTCERT202400007548_1.0002.TIF
160	30	SB20BO00940200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=75	F2329 CTCERT202400007549_1.0001.TIF CTCERT202400007549_1.0002.TIF
170	10	SB20BO00980200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=80	F2329 CTCERT202400007550_1.0001.TIF CTCERT202400007550_1.0002.TIF
180	20	SB20BO00990300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=110	F2329 CTCERT202400007551_1.0001.TIF CTCERT202400007551_1.0002.TIF
190	80	SB20BO04200300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=105	F2329 CTCERT202400007552_1.0001.TIF CTCERT202400007552_1.0002.TIF
200	10	SB20BO32470300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=120	F2329 CTCERT202400007553_1.0001.TIF CTCERT202400007553_1.0002.TIF
210	30	SB20BO34450200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=105	F2329 CTCERT202400007554_1.0001.TIF CTCERT202400007554_1.0002.TIF
220	20	SB2WBO01960200 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=60	F2329 CTCERT202400007555_1.0001.TIF CTCERT202400007555_1.0002.TIF

raccortubi

00010482

15/11/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 15/11/2024
Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
				TIRANTI FILETTATI CON 2 DADI:	
140	NR	4	0.00	SB20BO00650200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-'' L=85	F2329
150	NR	20	0.00	SB20BO00680300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-'' L=100	F2329
160	NR	30	0.00	SB20BO00940200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-'' L=75	F2329
170	NR	10	0.00	SB20BO00980200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-'' L=80	F2329
180	NR	20	0.00	SB20BO00990300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-'' L=110	F2329
190	NR	80	0.00	SB20BO04200300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-'' L=105	F2329

raccortubi

00010482

15/11/2024

CERTIFICATO DI CONFORMITA'
Ex works quality certificate of inspection
Certificat de conformite'

Cliente Customer: ROSETTI MARINO S.p.A.
Commessa Job N. 00003948
Ordine N. P.O. number: 1724001828 - 12.09.24
123A90A - Base Load Power Hub Platform

Si certifica che il materiale sotto elencato e' conforme ai requisiti di qualita' contrattuali inclusi i codici applicabili, gli standard e le specifiche, ha soddisfacentemente superato le prove di ispezioni e collaudi richiesti ed e' stato percio' autorizzato alla spedizione.

This is to certify that the material listed hereinbelow conform to contractual quality requirements including applicable codes, standards and specifications and has satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Nous declarons que le materiel sous mentionne est conforme a les indications de la qualite' contractuelles, aux codes, les standards et specifications applicables; il a depasse favourablement les esaais d'inspection et les inspections demandes et il a ete donc authorise a l'expedition.

Date: 15/11/2024

Signed by Q.A. dept:

Tipo di Mat.le e specifiche: come da ordine
Mat.l type and spec.s: as per P.Order

Pos. *Item*	U.M.	Q.ta' *Q.ty*	Tubi *Tubes*	Descrizione *Description*	N° Colata o Marcatura Pz. *Heat N° or PCS. Marking*
200	NR	10	0.00	SB20BO32470300 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-'' L=120	F2329
210	NR	30	0.00	SB20BO34450200 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-'' L=105	F2329
220	NR	20	0.00	SB2WBO01960200 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-'' L=60	F2329

Pressbolt s.r.l. con unico socio
Partita Iva 03231770136
Via dell'Artigianato, 12 - 22078 - Turate (CO)
Tel. +39 02 96.97.98.50 - Fax +39 02 96.97.98.29
email qualita@pressbolt.com

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VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	1	Item	10
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0085 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
111462	4	P1691110	0001259766

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.42	0.79	0.23	0.01	0.025	1.05	0.17	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1049.7	977.6	22.2	56.5

	Hardness "HB"
Required	max 321
Actual	315;315;315

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 1/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 140 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00650200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=85

raccortubi Heat num. or Pcs. marking: F2329 - Qty:4,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY * Issued 15-11-2024

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	1	Item	20
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	8	P1679106	0001259767

Chemical Analysis "%"

	C	Mn	Si	P	S	
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05	
Actual	0.45	0.70	0.23	0.012	0.022	

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	291;298;310	230;231;257

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 2/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 140 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00650200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=85

raccortubi Heat num. or Pcs. marking: F2329 - Qty:4,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	2	Item	30
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0100 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	20	P1690060	0001259768

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.77	0.219	0.012	0.0252	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1003	797	23.5	60.3

	Hardness "HB"
Required	max 321
Actual	301;301;301

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	2	Item	40
Job		Shipping ref.	3415931 of 05 November 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
554325	40	P1680008	0001259769

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.450	0.740	0.220	0.014	0.029

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	278;297;292	246;234;246

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 4/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 150 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00680300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=100

raccortubi Heat num. or Pcs. marking: F2329 - Qty:20,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
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Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	3	Item	50
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0075 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
111462	30	P1691109	0001259770

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.42	0.79	0.23	0.01	0.025	1.05	0.17	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1049.7	977.6	22.2	56.5

	Hardness "HB"
Required	max 321
Actual	315;315;315

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT

Davide Feggi
Laboratory manager

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Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 160 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00940200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=75

raccortubi Heat num. or Pcs. marking: F2329 - Qty:30,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY * Issued 15-11-2024

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Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	3	Item	60
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	60	P1679106	0001259771

Chemical Analysis "%"

	C	Mn	Si	P	S	
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05	
Actual	0.45	0.70	0.23	0.012	0.022	

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	291;298;310	230;231;257

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 6/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 160 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00940200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=75

raccortubi Heat num. or Pcs. marking: F2329 - Qty:30,00

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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	4	Item	70
Job		Shipping ref.	3415931 of 05 November 2024

Standard

ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0080 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
111462	10	P1694104	0001259772

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.42	0.79	0.23	0.01	0.025	1.05	0.17	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1049.7	977.6	22.2	56.5

	Hardness "HB"
Required	max 321
Actual	315;315;315

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 7/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00980200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=80

raccortubi Heat num. or Pcs. marking: F2329 - Qty:10,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	4	Item	80
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	20	P1679106	0001259773

Chemical Analysis "%"

	C	Mn	Si	P	S	
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05	
Actual	0.45	0.70	0.23	0.012	0.022	

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	291;298;310	230;231;257

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 8/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 170 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00980200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=80

raccortubi Heat num. or Pcs. marking: F2329 - Qty:10,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	5	Item	90
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0110 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	20	P1686091	0001259774

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.77	0.219	0.012	0.0252	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1003	797	23.5	60.3

	Hardness "HB"
Required	max 321
Actual	301;301;301

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 9/18

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 180 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00990300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=110

raccortubi Heat num. or Pcs. marking: F2329 - Qty:20,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
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Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	5	Item	100
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
554325	40	P1680008	0001259775

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.450	0.740	0.220	0.014	0.029

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	278;297;292	246;234;246

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.p.A.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 10/18

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 180 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO00990300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=110

raccortubi Heat num. or Pcs. marking: F2329 - Qty:20,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
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Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	6	Item	110
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0105 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	80	P1694107	0001259776

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.770	0.219	0.012	0.025	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1001	796	23.6	60.3

	Hardness "HB"
Required	max 321
Actual	301;300;299

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 11/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 190 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO04200300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8" L=105

raccortubi Heat num. or Pcs. marking: F2329 - Qty:80,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

Pressbolt s.r.l. con unico socio
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Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	6	Item	120
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
554325	160	P1680008	0001259777

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.450	0.740	0.220	0.014	0.029

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	278;297;292	246;234;246

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 12/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 190 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO04200300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=105

raccortubi Heat num. or Pcs. marking: F2329 - Qty:80,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	7	Item	130
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 5/8"-11 UNCX0120 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
103540	10	P1694108	0001259778

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.412	0.77	0.219	0.012	0.0252	1.047	0.172	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1003	797	23.5	60.3

	Hardness "HB"
Required	max 321
Actual	301;301;301

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 000003171182 Rev. 000 of 06 November 2024 - Page 13/18

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 200 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO32470300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=120

raccortubi Heat num. or Pcs. marking: F2329 - Qty:10,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Messrs. RACCORTUBI S.p.A.
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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	7	Item	140
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 5/8"-11 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
554325	20	P1680008	0001259779

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.450	0.740	0.220	0.014	0.029

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	278;297;292	246;234;246

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 14/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 200 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO32470300
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 5/8-" L=120

raccortubi Heat num. or Pcs. marking: F2329 - Qty:10,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

Pressbolt s.r.l. con unico socio
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Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	8	Item	150
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0105 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
BC6380	30	P1694105	0001259780

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.430	0.760	0.210	0.008	0.024	1.020	0.170	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	982	803	23.3	61.7

	Hardness "HB"
Required	max 321
Actual	299;307;304

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.r.l.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 15/18

Customer: ROSETTI MARINO S.p.A.
Order: 1724001828 - 12.09.24 - Item n.: 210 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO34450200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=105

raccortubi Heat num. or Pcs. marking: F2329 - Qty:30,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

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Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	8	Item	160
Job		Shipping ref.	3415931 of 05 November 2024

Standard

ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	60	P1679106	0001259781

Chemical Analysis "%"

	C	Mn	Si	P	S	
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05	
Actual	0.45	0.70	0.23	0.012	0.022	

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	291;298;310	230;231;257

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT S.R.L.

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 16/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 210 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB20BO34450200
Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=105

raccortubi Heat num. or Pcs. marking: F2329 - Qty:30,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
* Issued 15-11-2024

PRESSBOLT

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Messrs. RACCORTUBI S.p.A.
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20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	9	Item	170
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A193(M)-23 / ASME SA193(M) BPVC-IIA-2021 - B7

Item Description	Heat Treatment
STUDBOLT ASME B16.5 A/SA 193 B7 1/2"-13 UNCX0060 HOT DIP GALVANIZED ASTM A153 / F2329	QUENCHED Min 830 C AND TEMPERED Min 593 C

Heat	Quantity	Lot	Job PB
111462	20	P1686993	0001259782

Chemical Analysis "%"

	C	Mn	Si	P	S	Cr	Mo	
Required	0.38-0.48	0.75 - 1	0.15-0.35	max 0.035	max 0.04	0.8 - 1.1	0.15-0.25	
Actual	0.42	0.79	0.23	0.01	0.025	1.05	0.17	

Tensile Test

	Rm "Mpa"	Rp02 "Mpa"	A "%"	Z "%"
Required	Min 860	Min 720	min 16	min 50
Actual	1049.7	977.6	22.2	56.5

	Hardness "HB"
Required	max 321
Actual	315;315;315

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

QUALITY DEPARTMENT PRESSBOLT

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 17/18

Customer: ROSETTI MARINO S.p.A.

Order: 1724001828 - 12.09.24 - Item n.: 220 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400003948

Description: SB2WBO01960200
Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized 1/2-" L=60

raccortubi Heat num. or Pcs. marking: F2329 - Qty:20,00

Protocol: CTCERC202400010482 * CERTIFIED TRUE COPY
*Issued 15-11-2024

PRESSBOLT
Pressbolt s.r.l. con unico socio
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Messrs. RACCORTUBI S.p.A.
VIALE KENNEDY, 59
20010 - MARCALLO CON CASONE(MI)

Inspection Certificate EN 10204:2004 3.1

Number	Rev.	Date
3171182	0	06 November 2024

Client Reference Order		Reference Order	
Number	00006437 of 16 September 2024	Number	3405096
Reference			
Item	9	Item	180
Job		Shipping ref.	3415931 of 05 November 2024

Standard
ASTM A194(M)-22 / ASME SA194(M) BPVC-IIA-2021 - Gr.2H

Item Description	Heat Treatment
HEAVY HEX NUT H=d ASME B18.2.2. Tab 10 A/SA 194 2H 1/2"-13 UNC HOT DIP GALVANIZED ASTM A153 / F2329 O.S.#2	QUENCHED Min 820 AND TEMPERED Min 455 C

Heat	Quantity	Lot	Job PB
73178	40	P1679106	0001259783

Chemical Analysis "%"

	C	Mn	Si	P	S
Required	Min 0.4	Max 1	max 0.4	max 0.04	max 0.05
Actual	0.45	0.70	0.23	0.012	0.022

	Proof Load	Hardness "HB"	Hardness test after Termical Tr
Required	Positive	248 - 327	Min. 179
Actual	Positive	291;298;310	230;231;257

Mechanical tests are longitudinal performed at t/2 or t/4 as a function of specimen dimension

Macroetch Examination	Positive	Visual and dimensional Test	Positive

PED 2014/68/EU

The material was manufactured, tested and checked in accordance with the specifications and additional requirements of the Purchase Order or the Agreement
No weld repair has been performed on the material

Davide Feggi
Laboratory manager

Pressbolt s.r.l. con unico socio - Certificate N 0000003171182 Rev. 000 of 06 November 2024 - Page 18/18

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FERRARI SRL	1724001966	123A90A	Q012400863

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **08.10.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

FERRARI
Via Achille Grandi n. 29 (Zona Bassette) 48123 Ravenna - ITALIA
P.IVA 01134740396 Tel. 0544/608311 - Fax 0544 451801
CF e Iscr.Reg.Impr. 01134740396
Cod.ident. CEE IT 01134740396 M. RA 003417 - R.E.A. RA 122802
CAP. SOC. Euro 46.800,00 www.ferrari-ra.it info@ferrari-ra.it

(A04) # MATERIAL TEST CERTIFICATE

- ☐ UNI/EN 10204:2004 2.2 - EN 10168:2004
- ☒ UNI/EN 10204:2004 3.1 - EN 10168:2004
- ☐ UNI/EN 10204:2004 3.2 - EN 10168:2004

Azienda con sistema di gestione certificato da IGQ secondo UNI EN ISO 9001
IGQ system quality certified company according to UNI EN ISO 9001

(A03) Cert.N°: 3.825 Rev.:
Page: 1 of 1
(Z02) Date: 07/10/2024
Ddt N°: AB1 / 2.932

(A06) CUSTOMER / CONSIGNEE:	ROSETTI MARINO S.p.A.	(A08) Job N°:	2.460
(A07) PURCHASE ORDER:	1724001966 123A90A - JOB : 123A90A	(B02) Steel Designation:	A/SA182 F316/316L

Item	(B08) Qty	(A09/B01 - B09 - B11) Description Material - Product	(B07) Heat No.	Supplier
10	2,00	FLG LWN 150 RF 2" Id=50,8 L=230 A/SA182 F316/316L	E230125	12246-OUTOKUMPU

CHEMICAL ANALYSIS % (C71 - C92)

(B07) Heat N.	C Mn	Si Cr	Ni Mo	Cu Ca	P S	V Nb	V+Nb Fe	As Sn	Sb Al	Ti W	O_2 H_2	N_2 B	Ceq Ceq(SF)	Co Nb+Ta	Cr+Mo Cr+Mo+N	V+Nb+Ti Cr+Ni+Cu+Mo	J fact. X fact.	(C01)
E230125	0,018 1,660	0,330 17,880	10,860 2,120		0,0300 0,0010							0,0690	5,02 0,29		20,000 20,069	30,860	597 30	L

MECHANICAL TESTS (C01 - C69)

(B07) Heat N.	(C01) Location	(C02) Direction	(C10) Shape	(C03) Temp C°	(C11) Yield Stress	(C12) Tensile Strength	(C13) Elongation on 2"	(C14) Reduction of Area	(C30) Test Method	(C31) Hardness	(C01) Location	(C02) Direction	Impact Test (J) (C49)10x10 mm.				(C03) Temp C°	(B05) Heat Treatment
													(C42) Obtained			(C43)Mean		
			mm		N/mm²	N/mm²	%	%										
E230125	T/2	Q	12,5x50	20	272,8	560,1	61,8	76,6	HB	170 173							20	S

(B05)	N=Normalized	T=Normalized And Tempered	A=Annealed	Q=Quenched And Tempered	S=Solution Treat & Quench
(C01) Location:	F=Full thk.	S=Surface	T/4=1/4 thk.	T/2=1/2 thk.	L=Ladle Analysis P=Product Analysis
(C02) Direction:	T=Transvers	L=Longitudinal	R=Radial	Q=Tangential	

NOTE:
-
- Material according to ASTM A182/A182M-23
  Material according to ASME II Part.A SA-182/SA-182M Ed.2023
- Material solution annealing at 1100°C and water cooling
- Material in compliance with specification and order

(Z03) Inspection Representative	(Z05) Inspection Authority	(Z06) Customer
FERRARI s.r.l. Luca Ravagli		

This document has been prepared electronically and is valid without signature

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
RACCORTUBI	1724002052	123A90A	Q012400998

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **15.11.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

raccortubi
Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI) 13/11/2024

ROSETTI MARINO S.p.A.
Via Trieste, 230
48122 - RAVENNA

Uff. Collaudi

OGGETTO /Subject:

- TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche
- Test certificates transmittal

-Vi inviamo in allegato la certificazione relativa al seguente ordine:
-Please find here attached material test certificates for the above mentioned P.Order:

Type	EN 10204:2005 3.1
Prot. N.	00010357
Packing list	PLPLIS202400010284
Ns. Rif.	00004536
Vs. Rif.	1724002052 - 11.10.24
	123A90A - Base Load

DISTINTI SALUTI
Best Regards
raccortubi

raccortubi

00010357

13/11/2024

ALLEGATO RIASSUNTIVO
Summary of test certificates

Cliente Customer: ROSETTI MARINO S.p.A.

Commessa Job N. 00004536

Ordine N. P.O. number: 1724002052 - 11.10.24

123A90A - Base Load Power Hub Platform

Pos. *Item*	Q.ta' *Q.ty*	Descrizione *Description*	N° Colata o Marcatura Pz. Immagine *Heat N° or PCS. Marking Image*
10	1	E90RCS04991H00 CURVE 90° LR 1.1/2" XS SEAMLESS	413640 CTCERT202400007345_1.0001.TIF
20	1	TEE0CS05251H00 TEE UG. 1.1/2" XS SEAMLESS	0D CTCERT202400007346_1.0001.TIF

EITI - The Inspection Body.

qualytube

EITI S.r.l. - Qualytube Division
Via Pietro Palmieri 29, 10138 Torino
Via Enrico Berlinguer 4, 20060 Pozzo d'Adda (MI)

MagneticTest Report

Test Report
Rapporto di Prova
Prüfbericht
Rapport d'essai

Report No. - Rapporto N°
Berichten Nr. - Rapport N° : MT24042

Date - Data - Vom - date : 12/11/2024

Customer - Cliente - Besteller - Acheteur 1)
RACCORTUBI

Customer - Cliente - Besteller - Acheteur 2)

Order No. - Ordine N° - Bestell-Nr. - Commande N°
No. 93

Performed Test
100% MAGNETIC TEST ON ACCESSIBLE SURFACE

Material Description- Descrizione del Materiale
Gegenstand - Dèsignation du Produit
see table below

Test	Electromagnetic joke	**According to**	EN 10246-12 ASTM E709 - ASME VIII Division 1 App.6/8
Particles type	fluorescent	**According to**	ASTM SA960 SUPPLEMENTARY S53
Joke	AC - Magnafulx	**Particles Description**	MG ICRI G182 batch. No. 2015 04 H2
Calibration block	ASME 4,5 Kg	**Inspection conditions**	BLACK UV LIGHT - 1000 µW/cm2 min.
		Pie gauge	ASME

Result - Esito
Ergebnis - Résultat
SATISFACTORY
NO REPORTABLE INDICATIONS HAVE BEEN FOUND

ITEM	DIAMETER (NPS) THICKNESS (mm)	STANDARD / GRADE	HEAT	No.		NOTE
	1.1/2" sch. 80/S	CURVA 90 ASME/ASTM SA/A 420 WPL6	413640	1		
	1.1/2" sch. 80/S	TEE UG. ASME/ASTM SA/A 420 WPL6	0D	1		

issued by **Verified by** **Customer**

Qualytube
Nicolò Tuzzi – NDT Specialist
ISO 9712 EITI/18046/PND/C Level 2 UT
ISO 9712 CICPND 27058/PND/C Level 2 PT
ISO 9712 CICPND 28229/PND/C Level 2 MT

EITI - European Institute of Technical Inspections
Dario Pasqualini
Technical Director
ISO 9712 Level 3 – UT/PT/VT/RT

I.R.C. S.p.A.
SEDE LEGALE:
Via Guameri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-836500 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc/Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	9083-P1	23/10/2024
Purchaser	030206009064 -	
Order	2090	

	Item	Quantity	Heat Id.
1	CURVA 1.1/2" XS 90° LR WPL6	1,00	413640

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Nb%
0,150	0,580	0,210	0,018	0,013	0,042	0,046	0,018	0,078	0,008	0,0020

CE_{IIW} 0,27

Legenda $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$ Pcm = $C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B$ J-Factor = $(Si+Mn)*(P+Sn)*10000$ CE = $C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)$

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	295	503	33

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
5 X 10	0,4	Base Mat.	67	54	62	61

Hardness Test

Base Metal Avg 136 HBW

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

This certificate is issued by a computerized system and is valid without stamp and signature. This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

Customer: ROSETTI MARINO S.p.A.

Order: 1724002052 - 11.10.24 - Item n.: 10 - Project: 123A90A - Base Load Power Hub Platform - Our ref.: OCVEIT202400004536

Description: E90RCS04991H00 - CURVE 90° LR 1.1/2" XS SEAMLESS

raccortubi Heat num. or Pcs. marking: 413640 - Qty:1,00

Protocol: CTCERC202400010357 * CERTIFIED TRUE COPY * Issued 13-11-2024

I.R.C. S.p.A.
SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 28016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-836500 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT 01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate
EN 10204-2004 3.1

Document no.	9083-P2
Purchaser	030206009064 -
Order	2090

	Item	Quantity	Heat Id.
2	TEE 1.1/2" XS WPL6	1,00	0D-0D1533

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	TEE COLD FORMED, THEN HEAT TREATED AND MAGNETIC PARTICLE EXAMINATED ACCORDING ASTM E709
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Al%	N%	Ti%	Nb%
0,110	1,280	0,290	0,009	0,004	0,020	0,120	0,020	0,020	0,001	0,012	0,0020	0,0020	0,0010
	CE_{IIW} 0,35												

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/5+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	325	520	34

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
5 X 10	0,4	Base Mat.	55	61	58	58

Hardness Test

Base Metal Avg 140 HBW

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15
Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.
Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Official Designated Inspector	Purchaser Authorized Inspector

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Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

RosettiMarino

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order	Job	Barcode
PANTALONE SRL	1725000262	123A90	Q012501019

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

20.03.2025

Matteo Ceccarelli

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

PANTALONE SRL Doc. N° 2025-DDTC-0001066 Data 03.02.2025 Rif. Vs. Ordine 1725000262 123A90A ROSETTI MARINO SPA

ITEM 1 DESCRIZIONE RIDUZIONE CONCENT.SS A 420WPL6 mm. 114,30 x 60,32 Sch XS COLATA 15D3307 QTA 1,000

I.R.C. S.p.A.

SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/VEORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS
Quality Management System Certified Company

Inspection Certificate

EN 10204-2004 3.1

Document no.	8468-P29	10/10/2024
Purchaser	030206016170 - PANTALONE SRL	
Order	Ord.C/oVendReint601	

	Item	Quantity	Heat Id.
29	R.C. 4" x 2" XS WPL6	10,00	15D3307

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 780° - 980° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Nb%
0,120	1,300	0,250	0,013	0,002	0,020	0,120	0,010	0,020	0	0

CE_{IIW} 0,37

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	321	478	33

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
7.5 X 10	0,6	Base Mat.	141	158	151	150

Hardness Test

Base Metal Avg 138 HBW

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15

Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.

Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Quality Department	Official Designated Inspector	Purchaser Authorized Inspector
Luca Alessandrini			

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Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

PANTALONE SRL Doc. N° 2025-DDTC-0001066 Data 03.02.2025 Rif. Vs. Ordine 1725000262 123A90A ROSETTI MARINO SPA

ITEM 2 DESCRIZIONE RIDUZIONE CONCENT.SS A 420WPL6 mm. 60,32 x 33,40 Sch XS COLATA 433876 QTA 1,000

I.R.C. S.p.A.

SEDE LEGALE:
Via Guarneri del Gesù, 3 - I-26100 Cremona (CR) - Italy

STABILIMENTO E UFFICI:
Via E. Fermi, 7 - 29016 Cortemaggiore (PC) - Italy
Telefono: 0039 - 0523-839600 - Telefax: 0039 - 0523-836132
Web: www.ircbwf.it - E-mail: irc@ircbwf.it

EEC. CODE: IT01224220192
Cod. Fisc./Reg.Imprese: 00150030336 - P.IVA/EORI IT01224220192
REA CR 152967 - Export CR 011012 - Cap. Soc. EURO 20.134.400 I.V.

FITTING CONNECTIONS

Quality Management System Certified Company

Inspection Certificate

EN 10204-2004 3.1

Document no.	9466-P35	23/10/2023
Purchaser	030206016170 - PANTALONE SRL	
Order	Ord.C/oVendReint731	

	Item	Quantity	Heat Id.
35	R.C. 2" x 1" XS WPL6	10,00	433876

Specification	ASTM A 420/A 420M-20 / ASME SA-420/SA-420M-21 WPL6
Method of Fabrication	HOT FORMED BTW 760° - 960° C, COOLED IN STILL AIR
Heat Treatment	NORMALIZED AT 920°C [1 MIN / MM; 30 MINUTES MINIMUM] AND COOLING IN STILL AIR
Type of construction	SEAMLESS MANUFACTURED FROM PIPE (FULLY KILLED STEEL AND FINE GRAIN PRACTICE)
Manufacture standard	ASME B16.9 - 2018 / ASME B16.25 - 2018 FIG.2A/3A (AS APPLICABLE)

Ladle Analysis

C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Cu%	V%	Nb%
0,220	0,620	0,260	0,025	0,016	0,046	0,044	0,015	0,070	0,016	0,0020

CE_{IIW} 0,35

Legenda: CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Pcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5*B J-Factor = (Si+Mn)*(P+Sn)*10000 CE = C+F*(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5*B)

Tensile Test

Base Metal Direction L

Unit	Y.S.	T.S.	Elongation %
MPA	298	523	36

Impact Test

Direction L Test Temperature -46 °C Test Type KV

Size (mm)	Section (cm2)		Impact Value (J) (1)	(2)	(3)	Avg
5 X 10	0,4	Base Mat.	87	91	79	86

Hardness Test

Base Metal Avg 140 HBW

NACE MR0175/ISO15156-2:2015 A.2 / NACE MR0103/ISO17945:2015, 13.1 & 15

Visual and dimensional check with satisfactory result - Marking: Manufacturer / Size / Wall thickness / Material / Heat Id.

Quality Assurance System in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex I, Paragraph 4.3, certified by TÜV Italia S.r.l. (No.Bo. 0948)

The products were manufactured, sampled, tested and inspected in accordance with the specifications and purchase order and were found to meet the requirements.

Mfr Authorized Inspector	Official Designated Inspector	Purchaser Authorized Inspector
Quality Department *Luca Alessandrini*		

This certificate is issued by a computerized system and is valid without stamp and signature

This certificate is not a declaration of origin nor may it be used as a declaration of origin

Legenda: RC=Concentric Reducer RE=Eccentric Reducer TEE=Tee Curva=Elbow Fondello=Cap Croce=Cross Tubo=Pipe

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
SIDERURGICA RAVENNATE 2.0 SRL	1724000275	123A40C	Q012400089

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data
MTSMD Signature — Date

Sonia Emiliani — **01.03.2024**

Emiliani Sonia
[X] REVIEW
[ ] WITNESS

CUSTOMER

NOTE

outokumpu

Certificate No. / Zeugnis Nr. / N° du certificat: 929116/002
Page / Seite / Page: 1(01)

INSPECTION CERTIFICATE 3.1
DIN EN 10204 3.1

Date Datum Date: 06.05.2022

Delivery address, Empfänger, Lieu de livraison:

SIDERURGICA RAVENNATE 2.0 Srl
COPIA CONFORME ALL'ORIGINALE
Ns. DDT Nr. 475 del 26/02/24

Ordine rosetti marino 1724000275

Requirements, Anforderungen, Exigences:
EN 10088-4:2009
AD 2000 W2, W10 & EN 10028-7:2016
ASTM A240/A240M
ASME SA-240/SA-240M II A ED. 2021

Our Order No. / Unser Auftrag Nr. / Notre commande n°: 360022971
Your order, Ihre Bestellung, Votre commande: 4500502396

MEDINOX
DI NANNI L. & C. S.A.S.

Product, Erzeugnisform, Produit: COIL , STAINLESS STEEL

Mark of Manufacturer / Zeichen des Lieferwerkes / Signe de producteur: outokumpu
Process / Erschmelzungsart / Mode de fusion: AOD

Inspector's stamp / Zeichen d. Sachverst. / Poinçon de l'expert

Grade, Werkstoff, Nuance: 1.4404 1.4401 TYPE 316L

Tolerances Toleranzen, Tolérances: EN ISO 9444-2

Marking, Kennzeichnung, Marquage: 1.4404 1D

Marks, Versandzeichen, Marques:

Line / Reihe / Ligne	Item / Position / Poste	Charge-test No. / Schmelze-Probe Nr. / Coulée n°	Size, Abmessungen, Dimensions	Quantity / Stückzahl / Nombre	Weight, Gewicht, Poids	Finish / Ausführung / Fini EN/ASTM
1	8	43076 6	6,0 X 1500 MM		12260 KG	1D/1

CE
10
0045-CPR-0567

Charge no. / Schmelze Nr. / Coulée n°	Chemical composition, Chemische Zusammensetzung, Composition chimiques										
	C %	Si %	Mn %	P %	S %	Cr %	Ni %	MO %	N %	CO %	CU %
43076	0,023	0,48	1,05	0,032	0,001	17,1	10,0	2,02	0,031	0,16	0,38

Line / Reihe / Ligne	Sample ID / Proben ID / Échantillon	Rp0.2 MPa	Rp1.0 MPa	Rm MPa	A5 %	A50 %	%	Hardness / Härte,Dureté HBW
1	01	280	320	585	57	57		153
	02	295	339	598	54	54		158

Mechanical properties, Mechanische Eigenschaften, Caractéristiques mecaniques

Tensile test, Zugversuch, Essai de traction: ISO 6892-1:2019 A224
SAMPLES PERPENDICULAR TO THE ROLLING DIRECTION

APPROVED ACC.TO AD2000-W0 WITH VERIFICATION OF THE UNIFORMITY OVER THE STRIP LENGTH. CERTIFIED ACC.TO PED 2014/68/EU BY TÜV NORD REG. NO. 0045. DOPS ACC. TO CPR AVAILABLE ON THE WEB PAGE BY STEEL NUMBER

Identity test, Verwechslungsprüfung, Controle d'identification: OK
Sizes, Abmessungen, Dimensions: OK
Surface, Oberfläche, Surface: OK
Test of intergran. corros, Prüfung auf interkrist. Korros, Test de corros. intercrist.
EN ISO 3651-2 A: OK

ASTM A240/A240M
ASME SA-240/SA-240M II A ED. 2021
TYPE 316
EN 10088-2:2014/1.4404, 1.4401
NACE MR0103/ISO 17945 AND
NACE MR0175/ISO 15156-1 / NACE MR0175/ISO 15156-3
HEAT TREATMENT 1070 C
INTERGRANULAR CORROSION ASTM A262 PRACTICE E: OK

Supplier Certificate (Sap) - FE001
113 180 007 000

We certify that the above mentioned products comply with the terms of the order contract.
Wir bestätigen, dass die Lieferung den Vereinbarungen der Bestellannahme entspricht.
Nous certifions que les produits énumérés ci-dessus sont conformes aux prescriptions de la commande.

This test certificate is made by controlled ADP-system and is valid without signature.
Dieses Zeugnis wurde von einem überprüften Datenverarbeitungssystem erstellt und ist ohne Unterschrift gültig.
Ce certificat a été établi par un système informatique controlé et est valide sans signature.

Outokumpu Stainless Oy

Authorized inspector / Werkssachverständiger / Inspecteur autorisé: SUSANNA SIUKONEN

FI-95490 Tornio, Finland
Tel. +358 16 4521,email certificate.tornio@outokumpu.com,
www.outokumpu.com
Domicile: Tornio, Finland. Business Identity Code 0823315-9

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
COMMERCIALE TUBI ACCIAIO SPA	1724000838	123A90A	Q012400332

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

16.05.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-22535	1 / 10

Date / Data: **August 30, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - item: **SM30057/LS0000014**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261027/005**

Manufacture Process / Proces de fabricatie:	Product Type / Tip de produs:	Surface / Suprafata:
NORMALIZED **NORMALIZATE**	**See note nr.1** **vezi nota nr.1**	**See note nr.2** **vezi nota nr.2**

Standard or Specification / Norma sau specificatie:	Steel Grade / Grad de otel:	Ends / Capete:
See note nr.3 **vezi nota nr.3**	**STEEL GR.6 ASTM A 333 AND ASME SA 333 NDE** **OTEL GR.6 ASTM A 333 AND ASME SA 333 NDE**	**SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**

Dimensions / Dimensiuni:	Schedule / Program:	Length / Lungime:	Quantity / Cantitate: **314Pcs/buc.**	Nominal Weight / Greutate nominala:
ø1.900" O.D. x .200" W.T.	**80**	**16.404 ft ÷ 22.966 ft**	**6601'11" ft** **24169,2 lb**	**3.64 lb/ft**
ø48.30mm O.D. x 5.08mm W.T.	.	**5000 mm ÷ 7000 mm**	**2012.27 mt** **10963 kg**	**5.42 Kg/m**

DELIVERY NOTES / NOTE DE LIVRARE

Delivery Notes / Note de livrare
Job Number / Nr. Comanda interna: 0031362988 / 000090
Shipping Note / Aviz de expeditie: 0105239412 - 30/08/2023
Address / Adresa: VIALE LIDICE, 40

Delivery Notes / Note de livrare	
Town / Oras:	10095 GRUGLIASCO
Country / Tara:	Italy

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Lot N° / Lot N°	Specimen condition / Conditie epruveta				Specimen dimensions / Dimensiuni epruvetelor		Test temp / Temp de incercare	Y.S. OffSet 0.2% Min: 240.00 Max: –	U.T.S. Req. Min: 415.00 Max: –	Y.S./U.T.S Req. Max. 0.85	Elongation / Alungire			
			Ls	Sc	Type / Tip	Ori	Size / Dimensiune	Area / Sectiune					Lo	Min.	Min.	Obt.
							mm	mm2	°C	MPa	MPa		cal.	mm	%	%
732804	B7364/AA	7	B	AM	Ss	L	12.60 x 5.30	67.80	+20	285.00	442.00	0.64	2"	50.0	24.9%	33.5%
732804	B7365/AA	7	B	AM	Ss	L	12.60 x 5.10	65.20	+20	320.00	447.00	0.72	2"	50.0	24.9%	33.5%
732804	B7366/AA	7	B	AM	Ss	L	12.72 x 5.25	67.80	+20	310.00	447.00	0.69	2"	50.0	24.9%	37.0%
732804	B7367/AA	7	B	AM	Ss	L	12.65 x 5.08	65.20	+20	316.00	451.00	0.70	2"	50.0	24.9%	32.5%
732804	B7368/AA	7	B	AM	Ss	L	12.60 x 4.95	63.30	+20	289.00	442.00	0.65	2"	50.0	24.9%	35.0%
732804	B7369/AA	7	B	AM	Ss	L	12.62 x 5.10	65.30	+20	321.00	447.00	0.72	2"	50.0	24.9%	37.5%
732804	B7370/AA	7	B	AM	Ss	L	12.75 x 4.90	63.40	+20	332.00	455.00	0.73	2"	50.0	24.9%	34.5%
732804	B7371/AA	7	B	AM	Ss	L	12.68 x 5.10	65.60	+20	294.00	444.00	0.66	2"	50.0	24.9%	37.5%
732804	B7372/AA	7	B	AM	Ss	L	12.70 x 4.95	63.80	+20	311.00	445.00	0.70	2"	50.0	24.9%	35.0%
732804	B7373/AA	7	B	AM	Ss	L	12.70 x 5.38	69.40	+20	298.00	440.00	0.68	2"	50.0	24.9%	35.0%
732804	B7374/AA	7	B	AM	Ss	L	12.65 x 5.30	68.10	+20	314.00	438.00	0.72	2"	50.0	24.9%	36.5%
732804	B7375/AA	7	B	AM	Ss	L	12.60 x 4.92	62.90	+20	320.00	454.00	0.70	2"	50.0	24.9%	34.5%

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Customer: ROSETTI MARINO SPA
P.O. No.: PO: 1724000838 123A90A REV.1
Heat No.: 732804-007
Cta's job: LC0000910
Item: 10
Kg 280
Mt. 51,51
Date: 13/05/2024
Pcs No.: 8

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-22535	2 / 10

Date / Data: August 30, 2023

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: COMMERCIALE TUBI ACCIAIO SPA		Customer's Order Item / Comanda clientului - Item: SM30057/LS0000014	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: 2261027/005
Manufacture Process / Proces de fabricatie: NORMALIZED / NORMALIZATE	Product Type / Tip de produs: See note nr.1 / vezi nota nr.1			Surface / Suprafata: See note nr.2 / vezi nota nr.2
Standard or Specification / Norma sau specificatie: See note nr.3 / vezi nota nr.3		Steel Grade / Grad de otel: STEEL GR 6 ASTM A 333 AND ASME SA 333 NDE / OTEL GR 6 ASTM A 333 AND ASME SA 333 NDE		Ends / Capete: SQUARE CUT / CAPETE NETEDE (TAIATE DREPT)
Dimensions / Dimensiuni: ø1.900" O.D. x .200" W.T. / ø48.30mm O.D. x 5.08mm W.T.	Schedule / Program: 80 / .	Length / Lungime: 16.404 ft ÷ 22.966 ft / 5000 mm ÷ 7000 mm	Quantity / Cantitate: 314Pcs/buc. 6601'11" ft 24169,2 lb / 2012.27 mt 10963 kg	Nominal Weight / Greutate nominala: 3.64 lb/ft / 5.42 Kg/m

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Lot N° / Lot N°	Specimen condition / Conditie epruveta: Ls	Sc	Type / Tip	Ori	Specimen dimensions / Dimensiuni epruvetelor: Size / Dimensiune mm	Area / Sectiune mm2	Test temp / Temp de incercare °C	Y.S. OffSet 0.2% Min: 240.00 Max: -- MPa	U.T.S. Req. Min: 415.00 Max: -- MPa	Y.S./U.T.S Req. Max. 0.85	Elongation / Alungire: Lo cal.	Min. mm	Min. %	Obt. %
732804	B7376/AA	7	B	AM	Ss	L	12.75 x 5.08	65.60	+20	309.00	442.00	0.70	2"	50.0	24.9%	36.0%
732804	B7377/AA	7	B	AM	Ss	L	12.65 x 5.30	68.10	+20	313.00	442.00	0.71	2"	50.0	24.9%	37.5%
732804	B7378/AA	7	B	AM	Ss	L	12.60 x 5.30	67.80	+20	316.00	445.00	0.71	2"	50.0	24.9%	35.5%
732804	B7379/AA	7	B	AM	Ss	L	12.65 x 5.10	65.50	+20	312.00	450.00	0.69	2"	50.0	24.9%	34.5%

AM: As manufactured / Ca fabricat
B: Body / Corp
L: Longitudinal / Longitudinal
Lo: Initial length / Lungime initiala
Ls: Location of sample / Locatia probei
Max: Maximum / Maxim
Min: Minimum / Minim
Obt: Obtained / Obtinut
Ori: Orientation / Orientare
Req. Max: Required maximum / Cerinta maxima
Req: Required / Cerinta
Sc: Specimen condition / Starea epruvetei
Ss: Strip specimen / Rectangular
U.T.S: Ultimate Tensile Strength / Rezistenta la rupere
Y.S: Yield Strength / Rezistenta la curgere

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Customer : ROSETTI MARINO SPA
Kg 280
Mt 51,51
Pcs No.: 8
Heat No.: 732804-007
Cta's job: LC0000910
Date: 13/05/2024
P.O. No.: PO: 1724000838 123A90A REV.1
Item: 10

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-22535	3 / 10

Date / Data: August 30, 2023

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: COMMERCIALE TUBI ACCIAIO SPA	Customer's Order item / Comanda clientului - Item: SM30057/LS0000014	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: 2261027/005
Manufacture Process / Proces de fabricatie: NORMALIZED / NORMALIZATE	Product Type / Tip de produs: See note nr.1 / vezi nota nr.1		Surface / Suprafata: See note nr.2 / vezi nota nr.2
Standard or Specification / Norma sau specificatie: See note nr.3 / vezi nota nr.3		Steel Grade / Grad de otel: STEEL GR 6 ASTM A 333 AND ASME SA 333 NDE / OTEL GR 6 ASTM A 333 AND ASME SA 333 NDE	Ends / Capete: SQUARE CUT / CAPETE NETEDE (TAIATE DREPT)
Dimensions / Dimensiuni: ø1.900" O.D. x .200" W.T. / ø48.30mm O.D. x 5.08mm W.T.	Schedule / Program: 80 / .	Length / Lungime: 16.404 ft ÷ 22.966 ft / 5000 mm ÷ 7000 mm	Quantity / Cantitate: 314Pcs/buc. 6601'11" ft 24169,2 lb / 2012.27 mt 10963 kg	Nominal Weight / Greutate nominala: 3.64 lb/ft / 5.42 Kg/m

CHEMICAL COMPOSITION / COMPOZITIE CHIMICA

				Composition % / Compozitie %																
				X 100									X 1000						X 10000		
				C	Mn	Si	Ni	Cr	Mo	Cu	Ce LF	F1	P	S	Al	Ti	Nb	V	N	B	Ca
			H Max	18	130	30	40	30	12	40	42	60	25	10	40	20	20	50	120	5	60
			Min	--	--	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heat N° / Sarja N°	Sample N° / Proba N°	Lot N°	P Max	18	130	30	40	30	12	40	42	60	25	10	40	20	20	50	120	5	60
			Min	--	--	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
732804			H	9	103	21	18	11	4	18	32	33.6	14	3	28	2	1	3	77	2	16
732804	B7364/AA	7	P	9	105	21	19	11	5	17	32	33.8	14	3	32	2	1	5	57	3	18
732804	B7365/AA	7	P	9	105	21	19	11	5	17	32	33.7	14	3	32	2	1	4	58	3	18

Ce LF: C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 — H: Heat / Sarja — Min: Minimum / Minim
F1: (V +Nb+Ti+Cu+Mo+Cr) — Max: Maximum / Maxim — P: Product / Produs

SUPERFICIAL HARDNESS / DURITATE SUPERFICIALA

Heat N° / Sarja N°	Sample N° / Proba N°	Lot N° / Lot N°	Ls	Sc	External / Exterior Scale / Scala: HRB Req. Min: -- Req. Max: 93.0		
732804	B7364/AA	7	B	AM	74.0	74.0	74.0

Heat N° / Sarja N°	Sample N° / Proba N°	Lot N° / Lot N°	Ls	Sc	External / Exterior Scale / Scala: HRB Req. Min: -- Req. Max: 93.0		
732804	B7365/AA	7	B	AM	73.0	73.0	73.0

AM: As manufactured / Ca fabricat — B: Body / Corp — Ls: Location of sample / Locatia probei — Sc: Specimen condition / Starea epruvetei

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Customer: ROSETTI MARINO SPA

Kg	280
Heat No.:	732804-007
Mt	51,51
P.O. No.:	PO: 1724000838 123A90A REV.1
Cta's job:	LC0000910
Pcs No.:	8
Item:	10
Date:	13/05/2024

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar: **02-23-22535** | Page / Pagina: **4 / 10**

Date / Data: **August 30, 2023**

Silcotub S.A. Plant
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450131 Zalau, Salaj
Romania
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - item: **SM30057/LS0000014**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261027/005**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **See note nr.3** **vezi nota nr.3**		Steel Grade / Grad de otel: **STEEL GR 6 ASTM A 333 AND ASME SA 333 NDE** **OTEL GR 6 ASTM A 333 AND ASME SA 333 NDE**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø1.900" O.D. x .200" W.T.** **ø48.30mm O.D. x 5.08mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 22.966 ft** **5000 mm ÷ 7000 mm**	Quantity / Cantitate: **314Pcs/buc.** **6601'11" ft** **24169,2 lb** **2012.27 mt** **10963 kg**	Nominal Weight / Greutate nominala: **3.64 lb/ft** **5.42 Kg/m**

THROUGH WALL HARDNESS / DURITATE PE GROSIME DE PERETE

Required values / Cerinta	Individuals / Individuale Min: –	Max: 200	Var: –	Average / Media Min: –	Max: –	Var: –	Hardness type/Tip de duritate:vickers			
Heat N° / Sarja N°	Sample N° / Proba N°	Lot N° / Lot N°	Specimen condition Ls	Sc			Quad.	Scale / Scara	OD Dist. (mm)	MW Avg.
732804	B7364/AA	7	B	AM			1	HV10	-	151

AM: As manufactured / Ca fabricat
Avg: Average / Media
B: Body / Corp
Dist: Distance from outer diameter / Distantia de la diametrul exterior
Ls: Location of sample / Locatia probei
Max: Maximum / Maxim
Min: Minimum / Minim
MW: Middle wall / Mijloc
OD: Outside Diameter / Diametrul exterior
Quad: Quadrant / Cadran
Sc: Specimen condition / Starea epruvetei
Var: Variation / Variatie

IMPACT TEST / TEST DE INCOVOIERE

Type/Tip: **ISO** | Orientation/Orientare: **L** | Unit / Unitate de masura: **JOULE**
Position/Pozitie: | Temp: **- 50** Unit/UM: **°C** | Ind.Min.Req: **8** Req.Min.Avg: **10**

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Lot N° / Lot N°	Ls	Sc	Size / Dimensiune mm	Results / Rezultate 1	2	3	Avg.
732804	B7364/AA	outside	7	B	AM	10 x 2.50	31.0	32.0	32.0	32.0

AM: As manufactured / Ca fabricat
Avg: Average / Media
B: Body / Corp
Ind. Min. Req: Individual Minimum Required / Cerinta minima individuala
L: Longitudinal / Longitudinal
Ls: Location of sample / Locatia probei
Req. Min. Avg: Required minimum average / Cerinta pentru valoarea medie minima
Sc: Specimen condition / Starea epruvetei
Temp: Temperature / Temperatura

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Customer: ROSETTI MARINO SPA
P.O. No.: PO: 1724000838 123A90A REV.1
Heat No.: 732804-007
Cta's job: LC0000910
Item: 10
Kg 280
Mt 51,51
Date: 13/05/2024
Pcs No.: 8

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-22535	5 / 10

Date / Data: **August 30, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - item: **SM30057/LS0000014**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261027/005**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **See note nr.3** **vezi nota nr.3**		Steel Grade / Grad de otel: **STEEL GR 6 ASTM A 333 AND ASME SA 333 NDE** **OTEL GR 6 ASTM A 333 AND ASME SA 333 NDE**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø1.900" O.D. x .200" W.T.** **ø48.30mm O.D. x 5.08mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 22.966 ft** **5000 mm ÷ 7000 mm**	Quantity / Cantitate: **314Pcs/buc.** **6601'11" ft** **24169,2 lb** **2012.27 mt** **10963 kg**	Nominal Weight / Greutate nominala: **3.64 lb/ft** **5.42 Kg/m**

IMPACT TEST / TEST DE INCOVOIERE

Type/Tip: **KCV** | Orientation/Orientare: **L** | Unit / Unitate de masura: **JOULE**
Position/Pozitie: | Temp: **- 53** | Unit/UM: **°C** | Ind.Min.Req: **5** | Req.Min.Avg: **6**

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Lot N° / Lot N°	Ls	Sc	Size / Dimensiune mm	Results / Rezultate 1	2	3	Avg.
732804	B7365/AA	outside	7	B	AM	10 x 3.30	43.0	42.0	41.0	42.0

AM: As manufactured / Ca fabricat
Avg: Average / Media
B: Body / Corp
Ind. Min. Req: Individual Minimum Required / Cerinta minima individuala
L: Longitudinal / Longitudinal
Ls: Location of sample / Locatia probei
Req. Min. Avg: Required minimum average / Cerinta pentru valoarea medie minima
Sc: Specimen condition / Starea epruvetei
Temp: Temperature / Temperatura

FLATTENING TEST / APLATISARE

Standard / Norma:

Heat N° / Sarja N°	Lot N° / Lot N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
732804	7	B7364/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7365/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7366/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7367/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7368/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7369/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7370/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7371/AA	E1	AM	5% of the lot	Good / Conform

Standard / Norma:

Heat N° / Sarja N°	Lot N° / Lot N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
732804	7	B7372/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7373/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7374/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7375/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7376/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7377/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7378/AA	E1	AM	5% of the lot	Good / Conform
732804	7	B7379/AA	E1	AM	5% of the lot	Good / Conform

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Customer : ROSETTI MARINO SPA

Kg	Heat No.:	Mt	Pcs No.:
280	732804-007	51,51	8

P.O. No.:	Cta's job:	Date:	Item:
PO: 1724000838 123A90A REV.1	LC0000910	13/05/2024	10

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-22535	6 / 10

Date / Data: **August 30, 2023**

Silcotub S.A. Plant
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450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30057/LS0000014**	Customer's Reference / Referinta clientului:	Manufacturer's Works Order N° / Comanda de vanzare: **2261027/005**

Manufacture Process / Proces de fabricatie:	Product Type / Tip de produs:	Surface / Suprafata:
NORMALIZED **NORMALIZATE**	**See note nr.1** **vezi nota nr.1**	**See note nr.2** **vezi nota nr.2**

Standard or Specification / Norma sau specificatie:	Steel Grade / Grad de otel:	Ends / Capete:
See note nr.3 **vezi nota nr.3**	**STEEL GR 6 ASTM A 333 AND ASME SA 333 NDE** **OTEL GR 6 ASTM A 333 AND ASME SA 333 NDE**	**SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**

Dimensions / Dimensiuni:	Schedule / Program:	Length / Lungime:	Quantity / Cantitate: **314Pcs/buc.**		Nominal Weight / Greutate nominala:
ø1.900" O.D. x .200" W.T.	**80**	**16.404 ft ÷ 22.966 ft**	**6601'11" ft**	**24169,2 lb**	**3.64 lb/ft**
ø48.30mm O.D. x 5.08mm W.T.	**.**	**5000 mm ÷ 7000 mm**	**2012,27 mt**	**10963 kg**	**5.42 Kg/m**

FLATTENING TEST / APLATISARE

AM: As manufactured / Ca fabricat E1 / E2: Ends of Sampling / Capatul testat Sc: Specimen condition / Starea epruvetei

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CTA Group
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Customer : ROSETTI MARINO SPA
P.O. No.: PO: 1724000838 123A90A REV.1
Heat No.: 732804-007
Cta's job: LC0000910
Item: 10
Kg 280
Mt 51,51
Date: 13/05/2024
Pcs No.: 8

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-22535	7 / 10
Date / Data: August 30, 2023	

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: COMMERCIALE TUBI ACCIAIO SPA	Customer's Order Item / Comanda clientului - Item: SM30057/LS0000014	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: 2261027/005
Manufacture Process / Procas de fabricatie: NORMALIZED / NORMALIZATE	Product Type / Tip de produs: See note nr.1 / vezi nota nr.1		Surface / Suprafata: See note nr.2 / vezi nota nr.2
Standard or Specification / Norma sau specificatie: See note nr.3 / vezi nota nr.3		Steel Grade / Grad de otel: STEEL GR 6 ASTM A 333 AND ASME SA 333 NDE / OTEL GR 6 ASTM A 333 AND ASME SA 333 NDE	Ends / Capete: SQUARE CUT / CAPETE NETEDE (TAIATE DREPT)

Dimensions / Dimensiuni:	Schedule / Program:	Length / Lungime:	Quantity / Cantitate: 314Pcs/buc.	Nominal Weight / Greutate nominala:
ø1.900" O.D. x .200" W.T.	80	16.404 ft ÷ 22.966 ft	6601'11" ft 24169,2 lb	3.64 lb/ft
ø48.30mm O.D. x 5.08mm W.T.	.	5000 mm ÷ 7000 mm	2012.27 mt 10963 kg	5.42 Kg/m

HYDROSTATIC TEST / PROBA HIDROSTATICA

Pressure / Presiune		Time / Timp	Results / Rezultat
nit / Unitate de masu	Value / Valoare	Seconds / Secunde	
MPa	17	5	Satisfactory / Conform

SUPPLEMENTARY INFORMATION / INFORMATIE SUPLIMENTARA

STANDARD EDITIONS / EDITIILE NORMELOR	
Standard:ASTM A 333/333M Year:2018	Norma:ASTM A 333/333M An:2018
Standard:ASME SA 333/333M Year:2021	Norma:ASME SA 333/333M An:2021
Standard:ASME B&PV CODE SECTION II Year:2021	Norma:ASME B&PV CODE SECTION II An:2021
Standard:ANSI/NACE MR0175-2021/ISO 15156-1:2020	Norma:ANSI/NACE MR0175-2021/ISO 15156-1:2020
Standard:ANSI/NACE MR0103-2015 (R2023) ISO 17945 Year:2015	Norma:ANSI/NACE MR0103-2015 (R2023) ISO 17945 An:2015

PRODUCT DESCRIPTION NOTES / NOTE DESCRIERE PRODUS	
Note 1 is the full description of the 'Product type'	Nota 1 si descrierea completa a 'Tip de produs'
SEAMLESS HOT FINISHED TUBES FOR LOW TEMPERATURE SERVICES (WITH SUPPLEMENTARY REQUIREMENTS)	TEVI PT. TEMPERATURI JOASE LAMINATE LA CALD (CU CERINTE SUPLIMENTARE FATA DE STANDARD)
Note 2 is the full description of the 'Surface'	Nota 2 si descrierea completa a 'Suprafata'
INTERNALLY BARE, EXTERNALLY VARNISHED WITH BLACK LACQUER ,	INTERIOR NEPROTEJATE , EXTERIOR LACUITE CU LAC NEGRU
Note 3 is the full description of the 'Standard or specification'	Nota 3 si descrierea completa a 'Norma sau specificatia'
NORM ASTM A 333 M,ASME SA333M, MPD-02-PS-GS R.1, NACE MR0175/ISO15156/MR0103, PED & TEMPL. CTA-MPD-6 REV.3	NORMA ASTM A 333 M,ASME SA333M, MPD-02-PS-GS R.1, NACE MR0175/ISO15156/MR0103, PED & TEMPL. CTA-MPD-6 REV.3

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Customer : ROSETTI MARINO SPA
Kg 280
P.O. No.: PO: 1724000838 123A90A REV.1
Heat No.: 732804-007
Mt 51,51
Cla's job: LC0000910
Pcs No.: 8
Item: 10
Date: 13/05/2024

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-22535	8 / 10
Date / Data: August 30, 2023	

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: COMMERCIALE TUBI ACCIAIO SPA	Customer's Order Item / Comanda clientului - item: SM30057/LS0000014	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: 2261027/005
Manufacture Process / Proces de fabricatie: NORMALIZED NORMALIZATE	Product Type / Tip de produs: See note nr.1 vezi nota nr.1		Surface / Suprafata: See note nr.2 vezi nota nr.2
Standard or Specification / Norma sau specificatie: See note nr.3 vezi nota nr.3		Steel Grade / Grad de otel: STEEL GR 6 ASTM A 333 AND ASME SA 333 NDE OTEL GR 6 ASTM A 333 AND ASME SA 333 NDE	Ends / Capete: SQUARE CUT CAPETE NETEDE (TAIATE DREPT)

Dimensions / Dimensiuni:	Schedule / Program:	Length / Lungime:	Quantity / Cantitate: 314Pcs/buc.		Nominal Weight / Greutate nominala:
ø1.900" O.D. x .200" W.T.	80	16.404 ft ÷ 22.966 ft	6601'11" ft	24169,2 lb	3.64 lb/ft
ø48.30mm O.D. x 5.08mm W.T.	.	5000 mm ÷ 7000 mm	2012.27 mt	10963 kg	5.42 Kg/m

SUPPLEMENTARY INFORMATION / INFORMATIE SUPLIMENTARA

Supplementary Information / Informatie Suplimentara	
NONDESTRUCTIVE TEST EMI ML ACC.TO ASTM E570 FULL LENGTH INSPECTI	CONTROL NEDISTRUCTIV EMI CONFORM ML CONF ASTM E570
ON FOR Trans OD Long ID Long OD DEFECTS: WITHOUT OBJECTIONS	FULL LENGTH INSPECTION
EMI NOTCH DEPTH Trans OD - 0,50mm Long ID - 0,50mm	PENTRU DEFECTE Trans OD Long ID Long OD: FARA OBIECTII
Long OD - 0,50mm	ADANCIME DE DEFECT EMI
MATERIAL ACC. TO ASME SECTION II PART.D TABELLA Y1	Trans OD - 0,50mm Long ID - 0,50mm Long OD - 0,50mm
MATERIAL ACC. TO ASME SECTION II PART A	MATERIAL CONFORM ASME SECTIUNEA II PART.D TABEL Y1
MATERIAL ACC. TO NACE MR 01-75/ISO 15156	MATERIAL CONFORM ASME SECTIUNEA II PART.A
MATERIAL ACC. TO NACE MR 01-03/ ISO 17945	MATERIAL CONFORM NACE MR 01-75/ISO 15156
MATERIAL ACCORDING TO PED 2014/68/EU	MATERIAL CONFORM NACE MR 01-03/ ISO 17945
"The material is free from mercury and radioctive	MATERIAL CONFORM PED 2014/68/EU
contamination"	"The material is free from mercury and radioctive
HEAT TREATMENT: NORMALIZED AT 920°C, SOAKING TIME 10 MIN.;	contamination"
COOLING MEDIUM: AIR	TRATAMENT TERMIC: NORMALIZARE LA 920°C, TIMP DE MENTINER 10 MIN.;
AFTER INSPECTION OPERATION, THE MATERIAL HAS NOT A RESIDUAL	MEDIU DE RACIRE: AER
MAGNETISM GREATER THAN 020 GAUSS.	DUPA OPERATIA DE CONTROL, MATERIALUL NU PREZINTA UN
"The steel is calcium treated for microinclusions shape control	MAGNETISM REZIDUAL MAI MARE DE 020 GAUSS.
The materialhas not a rezidual magnetism greater than 20 gauss"	"The steel is calcium treated for microinclusions shape control
	The material has not a rezidual magnetism greater than 20 gauss"
SEAMLESS HOT FINISHED PIPES	TEVI FARA SUDURA LAMINATE LA CALD
VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT	CONTROLUL VIZUAL DIMENSIONAL S-A REALIZAT CU REZULTATE SATISFACATOARE
STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE	OTELUL ESTE PRODUS IN CUPTOR ELECTRIC COMPLET CALMAT CONFORM UNEI PRACTICI DE OBTINERE A
	UNUI GRAUNTE FIN
THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER.	PRODUSUL LIVRAT ESTE IN CONFORMITATE CU CERINTELE COMENZII

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Customer : ROSETTI MARINO SPA
P.O. No.: PO: 1724000838 123A90A REV.1
Heat No.: 732804-007
Cia's job: LC0000910
Kg 280
Mt 51,51
Item: 10
Date: 13/05/2024
Pcs No.: 8

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-22535	9 / 10
Date / Data: August 30, 2023	

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalau, Sibiu
Romania
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: COMMERCIALE TUBI ACCIAIO SPA		Customer's Order Item / Comanda clientului - Item: SM30057/LS0000014	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: 2261027/005
Manufacture Process / Proces de fabricatie: NORMALIZED / NORMALIZATE	Product Type / Tip de produs: See note nr.1 / vezi nota nr.1			Surface / Suprafata: See note nr.2 / vezi nota nr.2
Standard or Specification / Norma sau specificatie: See note nr.3 / vezi nota nr.3		Steel Grade / Grad de otel: STEEL GR 6 ASTM A 333 AND ASME SA 333 NDE / OTEL GR 6 ASTM A 333 AND ASME SA 333 NDE		Ends / Capete: SQUARE CUT / CAPETE NETEDE (TAIATE DREPT)
Dimensions / Dimensiuni: ø1.900" O.D. x .200" W.T. / ø48.30mm O.D. x 5.08mm W.T.	Schedule / Program: 80 / .	Length / Lungime: 16.404 ft ÷ 22.966 ft / 5000 mm ÷ 7000 mm	Quantity / Cantitate: 314Pcs/buc. 6601'11" ft 24169,2 lb / 2012.27 mt 10963 kg	Nominal Weight / Greutate nominala: 3.64 lb/ft / 5.42 Kg/m

SUPPLEMENTARY INFORMATION / INFORMATIE SUPLIMENTARA

Supplementary Information / Informatie Suplimentara	
Tenaris IT identification number for MTC: 59\:\xt\	Tenaris IT numărul de identificare pentru MTC: 59\:\xt\

MARKING / MARCAJ

Marking / Marcaj	
STENCILING _T ASTM/ASME A/SA 333 Grade 6 48.30x 5.08 SCH.80 SMLS HF LT-50C 17 .0 MPA/NDE _HEAT _MM _MADE . LEGEND _T = TENARIS Logo _MM = Pipe/Tube Length in millimeters . PUNCHING _HEAT	PICTURA _T ASTM/ASME A/SA 333 Grade 6 48.30x 5.08 SCH.80 SMLS HF LT-50C 17 .0 MPA/NDE _HEAT _MM _MADE . LEGENDĂ _T = logo TENARIS _MM = Lungimea tubului în milimetri . POANSONARE _HEAT

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Customer : ROSETTI MARINO SPA
P.O. No.: PO: 1724000838 123A90A REV.1
Heat No.: 732804-007
Cta's job: LC0000910
Kg 280
Mt 51,51
Pcs No.: 8
Item: 10
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Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-22535	10 / 10

Date / Data: **August 30, 2023**

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450131 Zalau, Salaj
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Tel: + 40 260 620720
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Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30057/LS0000014**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261027/005**

Manufacture Process / Proces de fabricatie:	Product Type / Tip de produs:	Surface / Suprafata:
NORMALIZED **NORMALIZATE**	**See note nr.1** **vezi nota nr.1**	**See note nr.2** **vezi nota nr.2**

Standard or Specification / Norma sau specificatie:	Steel Grade / Grad de otel:	Ends / Capete:
See note nr.3 **vezi nota nr.3**	**STEEL GR 6 ASTM A 333 AND ASME SA 333 NDE** **OTEL GR 6 ASTM A 333 AND ASME SA 333 NDE**	**SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**

Dimensions / Dimensiuni:	Schedule / Program:	Length / Lungime:	Quantity / Cantitate: **314Pcs/buc.**		Nominal Weight / Greutate nominala:
ø1.900" O.D. x .200" W.T.	**80**	**16.404 ft ÷ 22.966 ft**	**6601'11" ft**	**24169,2 lb**	**3,64 lb/ft**
ø48.30mm O.D. x 5.08mm W.T.	.	**5000 mm ÷ 7000 mm**	**2012.27 mt**	**10963 kg**	**5.42 Kg/m**

The product certified herein has been manufactured, sampled, tested and inspected in accordance with the stated specifications and has been found to meet the requirements.
This certificate is not a declaration of origin nor may it be used as a declaration of origin.

Produsul certificat aici a fost fabricat, esantionat, testat si inspectat in conformitate cu specificatiile mentionate si s-a determinat ca indeplineste cerintele.
Acest certificat nu este o declaratie de origine si nici nu poate fi utilizat ca si o declaratie de origine.

	CUSTOMER . THIRD PARTY	TENARIS QUALITY DEPARTMENT SIGNATURE	
	INSPECTION COMPANY FIRMA TERTA DE INSPECTII	QUALITY CERTIFICATION DEPT. DEPARTAMENT CERTIFICARE CALITATE PUSCAS Daniela	QUALITY SENIOR DIRECTOR DIRECTOR SENIOR CALITATE CUBLESAN Rares

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Customer : ROSETTI MARINO SPA

Kg	280
Heat No.:	732804-007
Mt	51,51
Cta's job:	LC0000910
Pcs No.:	8
Date:	13/05/2024

P.O. No.: PO: 1724000838 123A90A REV.1

Item: 10

CTA Group	Kg 168	Mt 22,44	Pcs No.: 2
This document is reproduced by a computerized system and is conform to the original	Heat No.: R58853	Cta's job: LC0000910	Date: 13/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000838 123A90A REV.1		Item: 20

COD QC-3.1-Ed.2 REV 6/2017

Digitally signed by TMK-ARTROM S.A.
This document is certified to be electronically controlled and approved.
Signature requested by Maria Carmen Ivancea on 2022-06-22 15:25:40.684+03:00
The original electronic document can be retrieved by scanning the QR code to the left.

TMK-ARTROM S.A.
Draganesti Str. 30, Slatina, jud. OLT, Romania 230119
Tel: +40 (249) 436862, 434640, 434641
Fax: +40 (249) 434330, 437288
E-mail: office.slatina@tmk-artrom.eu www.tmk-artrom.eu
EUID: ROONRC.J28/9/1991; J28/9/31.01.1991
VAT No. RO 1510210/ 1992
Subscribed and Paid Share Capital: 291.587.538,34 lei

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No.: E10065 **Date: 15.06.2022**	**Manufacturer's mark :**	**Customer Order No.:** **LS-0000024**	**PL: 13241**

CUSTOMER: Commerciale Tubi Acciaio S.P.A.

Specifications: PED 2014/68/EU (Appendix 1, par. 4.3) + ASTM A333: 18; ASME A333-19; ASME B36.10M:18; ASME Section II part D, TAB.Y1; Spec. MPD-02-PS-GS REV. 1	**Dimensions: 60.3 x 5.54 x 10 000 to 11 800 mm** **Steel: Gr. 6**

Description: Hot rolled seamless steel pipes with bevelled ends ASME B16.25, clear lacquered; marking by painting at one end: TMK-ARTROM, standard/NACE MR, dimensions, steel grade, 7.48 Kg/m, LENGTH (m), 17.0 MPa/NDE, III, SMLS, 2" XS SCH. 80, LT-45, heat no., LOT, mill inspector no. 5, technical control sign; marking at one end: heat no.

Heat No.: R58853	**LOT no.: 485412**		**Steel melt and rolled in ROMANIA**
Quantity	**Pcs**	**Length m**	**Weight kg**
	216	2423.52	18062

Ladle Chemical Analyse (%)

C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	N	V	B	Ca
0.18	1.08	0.001	0.014	0.22	0.10	0.05	0.02	0.30	0.021	0.001	0.001	0.009	0.002	.0005	0.002

V+Nb+Ti+Cu+Mo+Cr: 0.374 CEiiw=0.401

Product Chemical Analyse (%)

C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B	Ca
0.18	1.07	0.001	0.015	0.22	0.10	0.05	0.02	0.31	0.024	0.001	0.001	0.001	0.0005	0.002
0.17	1.08	0.001	0.014	0.22	0.09	0.05	0.02	0.31	0.024	0.001	0.001	0.001	0.0005	0.002

Mechanical Properties

Heat treatment: normalized with temperature between 880°C - 940°C and cooled in still air, 10 min Hydraulic test pressure (ASTM A999): 17.0 MPa for 5 sec.: OK Test Eddy Current Acc. ASTM B309 / ISO 10893-1: OK Flattening test (ASTM A999): OK Hot yield at 343°C: 286 MPa (strip longitudinal 5.45 x 5.70 = 31.12 mm²) Hot yield at 538°C: 201 MPa (strip longitudinal 5.45 x 5.50 = 30.02 mm²).	Charpy V-Notch (ASTM A370) KV/Longitudinal 3.33 x 10[mm] 15 (13; 18; 15) J (-60°C) 17 (15; 17; 18) J (-59°C) KVc/Longitudinal 10 x 10[mm] 46 (39; 54; 45) J (-60°C) 50 (45; 51; 54) J (-59°C)	Melting process: electric arc furnace, fully killed Fine grain Hardness HRB: OD: 82 – 83 Hardness HRC max 22 (acc to NACE MR0175/ISO 15156-2; NACE MR0103/ISO 17945) Residual magnetism: max. 20 Gauss: OK

Visual inspection and dimensional check: OK
NO WELD REPAIR ON HEREBY CERTIFIED TUBES
The manufacturer of pipes is certified in acc. with ISO 9001: 2015, ISO 14001:2015 and ISO 45001:2018
THE PRODUCTS DELIVERED ARE CONTROLLED ON RADIOACTIVITY RESPECTIVELY ARE FREE FROM ADDITIONAL IONIC RADIATION AND MERCURY
The material "not contain intentional additions of elements such as lead, selenium, or sulphur to improve machinability"
Steel grade was treated with calcium for the shape control of micro inclusions.
La société TMK ARTROM S.A. garantit que tous le produits, object cu Certificat susdit, respectent en leur Totalité les Specifications de l'article 15 de l'Arrete Ministériel du 24 Mars 1978 modifié.
Cmax 0.25%, Pmax 0.05%, Smax 0.05%, Rm (N/mm2) max700, A(Lo=5.65√So) min.16% long, Rm(A-2) min 10500
E max0.9, A (Lo=5.65√So) min14%trans, RAmin 10500

Additional remarks: The requirements are fulfilled as per Annex 1 – Test results

CHIEF OF QC & TESTING OF THE METALLURGICAL TUBES PRODUCTS
LEITER DER QC & PRÜFUNG DER PRODUKTE VON METALLURGISCHEN ROHREN
Dipl. Eng. Silviu Barbulescu

MILL INSPECTOR
Eng. Constantin Lupu

This MTC is digitally signed and sealed by TMK-ARTROM S.A. IT system. The document is valid without handwritten signatures. To check its authenticity and integrity, please scan the QR code to download the original electronic document from our site. If you already received an electronic copy from your supplier, please make sure that the file is digitally signed by TMK- ARTROM S.A. Falsification of this document is punishable under the legal provisions and entitles us to claim damages.

THIS IS FOR CERTIFY THAT THE MATERIAL HEREIN DESCRIBED HAS BEEN MANUFACTURED WITH THE ORDERED SPECIFICATION AND THAT INFORMATION IS CORRECT, THEY MEET THE SPECIFICATION'S REQUIREMENTS AND ARE RECORDS IN OUR COMPANY DOCUMENTS.

CTA Group		Kg 168	Mt 22,44	Pcs No.: 2
This document is reproduced by a computerized system and is conform to the original		Heat No.: R58853	Cta's job: LC0000910	Date: 13/05/2024
Customer : ROSETTI MARINO SPA		P.O. No.: PO: 1724000838 123A90A REV.1		Item: 20

COD QC-3.1-Ed.2 REV 6/2017

TMK-ARTROM S.A.

Draganesti Str. 30, Slatina, jud. OLT, Romania 230119
Tel: +40 (249) 436862, 434640, 434641
Fax: +40 (249) 434330, 437288
E-mail: office.slatina@tmk-artrom.eu www.tmk-artrom.eu
EUID: ROONRC.J28/9/1991; J28/9/31.01.1991
VAT No. RO 1510210/ 1992
Subscribed and Paid Share Capital: 291.587.538,34 lei

No: E10065
Part 2
Annex:1 ; Page no.: 1/1

Test Results Mechanical Properties

TENSILE TEST (ASTM A370) – at room temperature- Test Specimen / Strip-longitudinal		Rp0.2 MPa	Rm MPa	Elongation %	Rp0.2/ Rm
Dimension – Specimen (mm): 1. 19.45 x 5.8 / 2. 19.0 x 5.75 / 3. 19.05 x 5.8 / 4. 19.15 x 5.8 / 5. 19.15 x 5.85 / 6. 18.95 x 5.45 / 7. 19.0 x 5.85 / 8. 19.45 x 5.75 / 9. 19.05 x 5.5 / 10. 19.45 x 5.5 / 11. 19.0 x 5.6	1.	376	549	32	0.68
	2.	402	542	33	0.74
	3.	398	529	32	0.75
	4.	406	556	31	0.73
	5.	387	544	32	0.71
Section – Specimen (mm^2): 1. 115.23 / 2. 111.48 / 3. 112.77 / 4. 113.38 / 5. 114.36 / 6. 105.35 / 7. 113.43 / 8. 114.23 / 9. 106.91 / 10. 109.24 / 11. 108.56	6.	406	529	32	0.77
	7.	382	537	31	0.71
	8.	401	544	31	0.74
	9.	389	541	32	0.72
Length - Specimen (Lo) (mm): 1. 50.8 / 2. 50.8 / 3. 50.8 / 4. 50.8 / 5. 50.8 / 6. 50.8 / 7. 50.8 / 8. 50.8 / 9. 50.8 / 10. 50.8 / 11. 50.8	10.	396	537	33	0.74
	11.	391	548	31	0.71

CHIEF OF QC & TESTING OF THE METALLURGICAL TUBES PRODUCTS
LEITER DER QC & PRÜFUNG DER PRODUKTE VON METALLURGISCHEN ROHREN
Dipl. Eng. Silviu Barbulescu

MILL INSPECTOR
Eng. Constantin Lupu

THIS IS FOR CERTIFY THAT THE MATERIAL HEREIN DESCRIBED HAS BEEN MANUFACTURED WITH THE ORDERED SPECIFICATION AND THAT INFORMATION IS CORRECT, THEY MEET THE SPECIFICATION'S REQUIREMENTS AND ARE RECORDS IN OUR COMPANY DOCUMENTS.

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Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000838 123A90A REV.1		Item: 30

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24A1222 (A03)
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Дата / Data 29.01.2024

Вантажоодержувач/ Consignee (A08.1) Commerciale Tubi Acciaio S.p.a. Viale Lidice,40, 10095 Grugliasco (TO), ITALY	Контракт №/ Contract # (A07) COC23/2234
	Заводське замовлення/Production order # (A08) 23-010401
Країна/ Country (A06.1) Italy	№ замовлення клієнта/ Customers ref # (A09) PO#SM30121/OS0000108
Транспортний засіб/ Vehicle № AO6191BA/AO0114XT	

(B01,B02,B03) Стан постачання / Dellivery condition	Труби сталеві безшовні гарячекатані для трубопроводів/Seamless steel hot-rolled pipes for pipelines
	ASTM A333/A333M-2018/ ASME SA333/SA333M-2019/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015
	6
	Труби відвантажені з фаскою./Pipes are beveled. Фаска за стандартом ASME B16.25 рис. 2a./Bevelled ends as per ASME B16.25 Fig 2a.
	Кінці труб оснащені пластиковими протекторами./The ends of pipes are equipped by plastic protectors.
	Труби покриті лаком./Pipes are coated with varnish.

Додаткова інформація/Additional information
Твердість відповідає вимогам NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB)./Hardness meets the requirements NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB).

Термообробка/Heat treatment
Труби виготовлені шляхом гарячої деформації і нормалізовані при температурі 845... 945 град., охолодження на повітрі./Pipes produced by Hot Forming followed by normalizing at the temperature 845 deg C to 945 deg C cooled at air.

№ поз. Item No	(B07.4) Номер пакунка Bundle#	(B07.3) Номери труб Pipe#	(B07.1) Номер плавки Heat#	(B07.2) Номер партії Inspection Lot#	(B09) Зовнішній діаметр OD	(B09) Товщина стінки WT	(B010) Довжина Length	(B11) Загальна довжина Total length	(B08) штуки pieces	(B13) Фактична вага Actual weight	
										брутто gross	нетто net
					мм mm	мм mm	м m	м m		кг kg	кг kg
1	24-12-02378	1-13	1240287	1147	114.3	6.02	10.00-11.80	152,77	13	2479	2469
2	24-12-02379	14-26	1240287	1147	114.3	6.02	10.00-11.80	152,77	13	2474	2464
3	24-12-02381	40-52	1240287	1147	114.3	6.02	10.00-11.80	152,85	13	2472	2462
4	24-12-02382	53-65	1240287	1147	114.3	6.02	10.00-11.80	152,84	13	2470	2460
5	24-12-02383	66-78	1240287	1147	114.3	6.02	10.00-11.80	152,86	13	2479	2469
6	24-12-02384	79-91	1240287	1147	114.3	6.02	10.00-11.80	152,83	13	2483	2473
				NPS 4	Sch 40 STD	РАЗОМ/TOTAL		916,92	78	14857	14797

ПАКУНКІВ/BUNDLES 6

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Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000838 123A90A REV.1		Item: 30

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
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No : 24A1222 (A03)
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(C71) **Хімічний склад по сертифікатним даним на заготівку в % /Heat analysis acc.to the billet manufacturer certificate %**

(B07.1) Номер плавки Heat #	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000
min	-	-	-	-	-	-	-	-	-	-	-	-	-
max	-	-	-	-	-	-	-	-	-	-	-	-	-
1240287	17.4	100.5	20.1	3	11	9	12.2	23.1	13	4	4	2	25

НД на заготівку/Normative documentation for billets	ТУ №18-2023
Завод виробник/Plant - manufacturer	"Дніпросталь"/"MP"DNEPROSTEEL"LLC
(C70)	Сталь вироблена методом плавління в електродуговій печі з подальшим безперервним розливом. Сталь повністю розкислена та дрібнозерниста. Сталь розкислена алюмінієм. Заготовка виготовлена з чавуну та сталі на ТОВ «МЗ Дніпросталь» (ЄДРПОУ номер 33718431) за адресою: Україна, м. Дніпро, вул. Дніпросталівська 4/ The steel is produced by melting in an electric arc furnace followed by continuous casting. The steel is fully killed and fine-grained. The steel is killed with aluminium. The billet is made of cast iron and steel at "MP"DNEPROSTEEL"LLC (USREOU number 33718431) at the following address: 4, Dneprostalivska Str., Dnipro, Ukraine.
(C93-C99)	Не містить жодних матеріалів або компонентів, що походять з Росії, Білорусі, окупованих територій України (Крим, Донецька, Луганська, Херсонська, Запорізька області), Ірану, Сирії, Північної Кореї чи будь-якої іншої санкційної юрисдикції. Митний код: заготовка, одержана безперервним литтям, кругла, з нелегованої сталі, з масовою часткою вуглецю менш як 0,25 % - 720719/ Does not contain any materials or components originating from Russia, Belarus, the occupied territories of Ukraine (Crimea, Donetsk, Luhansk, Kherson, Zaporizhzhia regions), Iran, Syria, North Korea or any other sanctioned jurisdiction. Customs code: The billets produced by continuous casting, round, of unalloyed steel with a mass fraction of carbon less than 0.25% – 720719

(C72) **Результати контролю хімічного складу металла труб/Results of chemical analysis of pipes**

(B07.1) Номер плавки Heat #	Номер партії Lot#	(C00.1) Зразок Test piece	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000
min			-	-	-	-	-	-	-	-	-	-	-	-	-
max			-	-	-	-	-	-	-	-	-	-	-	-	-
1240287		1	18	101	21	3	11	9	11	22	12	3	2	1	26
		2	18	101	21	3	11	9	11	22	12	3	2	1	26

Результати випробувань труб - Test results for pipes

Випробування на розтягнення/ Tensile test ASTM A370

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності t0,5 Yield strength t0,5	(C11) Межа плинності t0,5 Yield strength t0,5 t=	(C13) Відносне подовження Elongation 50	(C13) Відносне подовження Elongation 50 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of slip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Розрахункова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		415	-	240	-	26,0	-	-	-	-				
max		-	-	-	-	-	-	-	-	-				
1240287	1147	525	-	350	-	35,0	-	-	-	-	L	25.4		50
1240287	1147	525	-	360	-	36,0	-	-	-	-	L	25.4		50
1240287	1147	520	-	342	-	33,0	-	-	-	-	L	25.4		50
1240287	1147	520	-	350	-	38,0	-	-	-	-	L	25.4		50
1240287	1147	525	-	338	-	37,0	-	-	-	-	L	25.4		50

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen

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(A02)
ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE
EN 10204-2004/3.1

(A03)
No : 24A1222
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Випробування на удар/Impact test ASTM E23

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240287	1147	L	KV -45°C	9	38	31	17	28,6		10x5

* L - поздовжній зразок/Longitudial spesimen; T - поперечний зразок/transverse spesimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

(C30) **Твердість / Hardness test temperature +20°C**

(B07.1) Номер плавки Heat #	(B07.2) Номер партії Lot #	HRB (C31.1) 1	HRB (C31.1) 2	HRB (C31.1) 3	HRB (C32.1) ср.знач./av.	HRC (C31.2)	HB (C31.3) 1	HB (C31.3) 2	HB (C31.3) 3	HB (C31.3) ср.знач./av.	HV (C31.4) 1	HV (C31.4) 2	HV (C31.4) 3	HV (C31.4) 4	HV (C32.4) ср.знач./av.
min		-	-	-	-	-	-	-	-	-	-	-	-	-	-
max		100	100	100	100	22	-	-	-	-	-	-	-	-	-
1240287	1147	81	82	80	81	<22	-	-	-	-	-	-	-	-	-

(C50,D55)
Інші види контролю / Other tests

Вид випробування/ Type of test	Параметри/ Criteria		Результати контролю/ Test results
Сплющування/ Flattening tes	Труби пройшли випробування на сплющування./Pipes passed flattening test.	100%	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic tes	15,2MPa/5sec.	100%	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-destructive inspection full length bod	Метод контролю:/Method:/Магнітоіндукційний контроль:/Magnetic flux leakage inspection:/Поздовжня риска 12,5% на зовнішній і внутрішній поверхні по ISO 10893-1./Longitudinal notch with depth 12,5% on external and internal surface acc. to ISO 10893-1.	100%	Задовільно / Satisfactory
Візуальний контроль/ Visual inspectio	Вироби піддавалися візуальному огляду і контролю розмірів. / Visual and dimensional test is satisfactory.	100%	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspectio	За стандартом./As per Standard.	100%	Задовільно / Satisfactory

(A04,B06)
Маркування фарбою/ Marking paint
{Логотип полный} ASTM A333/A333M/ASME SA333/SA333M/ANSI/NACE MR0175/ISO 15156-2/ANSI/NACE MR0103/ISO 17945 33,4 4,55 6 HF SMLS {HEAT} 17,0MPA {длина трубы в метрах до двух десятичных знаков} {Вес трубы в кг} NPS 1 SCH 80 XS PO#SM30121/OS0000108 {Номер трубы} {месяц год} {Тип покрытия}

(Z01)
Труби виготовлені і випробувані відповідно до вимог ASTM A333/A333M-2018/ ASME SA333/SA333M-2019/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 і замовлення / Pipes were produced and inspected according to requirements of ASTM A333/A333M-2018/ ASME SA333/SA333M-2019/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 and order's requirements

(A05,Z02,Z03)

Дата/Data	
29.01.2024	Підпис особи, відповідальної за видачу сертифікату /Signature of Certificate ispector Васюк Я.В./Vasyuk Ya.V.

Вказівка в дужках відповідає кодам згідно EN 10168 /Indication in parentheses correspond to attributes according to EN 10168.

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INTERPIPE

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
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No : 24A1222 (A03)
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Дата / Data 29.01.2024

(Z05)
Ваші пропозиції щодо поліпшення продукції просимо надсилати на ел.адресу / Please send Your proposals for improving the product by e-mail or fax or by phone info@ nstp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379. e-mail: info@ua.interpipe.biz Phone: +38 (056)74-74-066 Fax: +38(056)770-20-01 Цей інспекційний сертифікат стосується лише перерахованої в ньому продукції. Неприпустимо внесення змін або інше неправомірне використання сертифіката. /This inspection certificatels only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada delle Burianella, 1/B - 29015 Castel San Giovanni(PC) ITALY
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Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

PM 6436 / 24

Rif. Lab SIM (FCP): **2188 / 24 (B / B)**

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 0864 L

Cliente/ Customer: **Commerciale Tubi Acciaio Spa Viale Lidice 38-40-42 10095 Grugliasco TO**

Ordine/ Order: **DP 24061**

Commessa/ Job:

Campione fornito da cliente/ Sample supplied by customer :Parte del prodotto finito/ part of finished product

Descrizione/ Description	Qtà/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
PIPE Ø 4" W.T. 6.02 mm	1		1240287	1240287	**ASTM A 333-18 Gr. 6**

PROVA DI RESILIENZA/ Notched-bar impact test [Decision rule: Qn]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Dimensioni/ Dimension mm *Size Width Lenght*	Posizione di prelievo/ Test position	Tipo/ Type	Temp./ Temp. °C	Energia Nominale/ Nominal Energy 750 #Fondoscala/ Full Scale — Energia Assorbita/ Absorbed energy J — Valore singolo/ Single Value			Media/ Average	Area di taglio/ Shear area % — Valore singolo/ Single Value	Average	Espansione laterale/ Lateral expansion mm — Valore singolo/ Single Value	Media/ Average	Data esecuzione/ Date of Testing
35245	ASTM A370 – 25 § 20-29	DP 24061	5 x 10 x 55	B L 1/2	KVB	-48	(≥7.0)	62,2	46,6	58,8	(≥9.0)	55,9					19/03/2024

Thermal conditioning with Cryostat and ethyl alcohol(time: min 5 minutes)

Esito/ Conclusion: Conforme a 'Specifica'/ Compliant with 'Specification'

ITEM 30

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente e modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are to charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
19/03/2024	Morresi Davide	Amani Paolo		
Data Rapporto di prova/ Test Report Date: 19/03/2024	*firmato elettronicamente/electronically signed*			

DECISION RULE:
- Qc — Conformative
- Qs — Semi-quantitative
- Qa — Quantitative (implicit Uncertainty)
- Qi — Quantitative (Non Implicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.

The result can be CUMPLIANT or NOT CUMPLIANT

Test Position Legend: [1/2]-1/2 thickness; [B]-Specimen in Base Material; [L]-long.

CARBON EQUIVALENT CERTIFICATE

DATE	12/04/2024
NR.	CEG 24016

Viale LIDICE 40 - 10095 GRUGLIASCO (Torino) - Italy- Tel +39 011 3145111- Fax +39 011 3145140 - e-mail: control.quality@ctaspa.com - web site: www.ctagroupwebsite.com

CUSTOMER	ROSETTI MARINO SPA			REF.CUSTOMER	PO: 1724000838 123A90A REV.1
INT JOB NR	LC 910			PRODUCT	SMLS LOW CARBON STEEL PIPES
O.D.	4	W.T.	6,02 mm	ITEM	30

CHEMICAL COMPOSITION

mtc	Heat	MATERIAL DESCRIPTION	C	Mn	Cr	Mo	V	Ni	Cu						Ceq (If-IIW)
24a1222	1240287	ASTM / ASME A/SA 333 Gr 6 - NACE MR 0175- 0103	0,174	1,005	0,09	0,013	0,004	0,122	0,23						0,39
															0,00
															0,00

REMARKS

This value is calculate with long formula Ce=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 as per mill test heat analisis attached issued by Manufacturer

SIGNATURE

ISSUED BY	VERIFIED BY		
COMMERCIALE TUBI ACCIAIO S.p.A. ANGELO FAVINI QUALITY CONTROL DEPARTMENT	COMMERCIALE TUBI ACCIAIO S.p.A.		

CTA Group	Kg 16	Mt 6,91	Pz No.: 1
This document is reproduced by a computerized system and is conform to the original	Heat No.: 129308	Cta's job: LC0000910	Date: 08/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000838 123A90A REV.1		Item: 40

TUBOS REUNIDOS GROUP, S.L.U

Barrio Sagarribai, 2 - 01470 AMURRIO (Spain)
Mill: TUBOS

QUALITY MANAGEMENT SYSTEM certified by LRQA

EN 10204:2004 / 3.1

CERTIFICADO DE CALIDAD
MILL TEST CERTIFICATE

THE BILLETS AND THE MATERIAL COVERED BY THIS CERTIFICATE ARE MANUFACTURED AT OUR STEEL PLANT IN AMURRIO, SPAIN.

Nº 0000360564/1 Rev. 001

CLIENTE: CUSTOMER	COMMERCIALE TUBI ACCIAIO SPA	PEDIDO / PARTIDA: P.ORDER / ITEM	SM20092/OS0000082 6.
PRODUCTO: ARTICLE	TUBERÍA SIN SOLDADURA LAMINADA EN CALIENTE HOT FINISHED SEAMLESS TUBES	CLI. MATERIAL: CLIENT MATERIAL	00260391GS1B1
EXTREMOS: ENDS	LISOS A ESCUADRA SQUARE CUT PLAIN END	REF. FABRICA: WORK ORDER	300022127 000060
NORMA / GRADO: API, STANDARD AND GRADE	ASTM A333/A333M-18 /ASME II SA-333/SA-333M 2021 GR. 6. FINE GRAIN PRACTICE	PROTECCIÓN SUPERF: EXT. COATING	LACA EXTERIOR EXTERNALLY DRY LACQUERED
		DIMENSIONAL STD:	ANSI/ASME B36.10M
ESPEC. ADICIONALES: ADITIONAL SPECS:	MPD-02-PS-GS REV. I NACE MR0175-2015/ISO15156-2020 NACE MR0103/ISO 17945 ED. 2015 ASME II.PART D.TABLE Y1	PROCESO FUSION: MELTING PROCESS	HORNO ELECTRICO ACERO TOTALMENTE CALMADO ELECTRIC FURNACE // FULLY KILLED
FAB. DE PALANQUILLA: BILLETS MANUFACTURE	COLADA CONTINUA CONTINUOUS CASTING		
DIMENSIONES: DIMENSIONS	26,70 NB X 3,91 MM. X 5-7 M.		
MARCAS: MARKING	ESTAMPADO: DIE STAMPING: HN (HEAT)		
	PINTADO: STENCILLED: TUBOS ASTM/ASME A/SA 333 GR. 6 3/4 " NPS 3,910 MM HFS HN (HEAT) SCH 80		
	CODIGO COLOR: COLOUR CODE		
EST. SUMINISTRO: SUPPLYING COND.	NORMALIZADO. ENFRIADO AL AIRE / NORMALIZED. COOLED IN STILL AIR 910 °C 6 MIN		

DESCRIPCION SUMINISTRO / DESCRIPTION OF DELIVERY

ITEM FAB. T.R. ITEM	ITEM CLI. CLIENTS ITEM	LONG.INDIV (M) INDIVIDUAL LENGTH	COLADA CAST NR.	Nº TUBOS QUANTITY	LONG. TOTAL (M) LENGTH	PESO(KG) WEIGHT
000060	6.	5,000 - 7,000	129308	1.387	9.614,560	21.609
TOTAL				1.387	9.614,560	21.609

Albaran/Delivery note/Lieferschein/ Bon de livraison: 80388944

TUBOS REUNIDOS GROUP (MILL: TUBOS) GARANTIZA QUE TODOS LOS TUBOS CUBIERTOS POR ESTE CERTIFICADO CUMPLEN LOS REQUISITOS DEL PEDIDO Y CON LAS ESPECIFICACIONES ARRIBA MENCIONADAS.
TUBOS REUNIDOS GROUP (MILL: TUBOS) CERTIFY THAT ALL THE TUBES COVERED BY THIS CERTIFICATE COMPLY WITH ORDER REQUIREMENTS AND ABOVE MENTIONED SPECIFICATIONS.

AMURRIO 26.04.2023

CONTROL DE CALIDAD DE TUBOS REUNIDOS GROUP
Mill: TUBOS
TUBOS REUNIDOS GROUP (QUALITY CONTROL)
Borja Aguzabal
P.O.:

CTA Group		Kg 16	Mt 6,91	Pz No.: 1
This document is reproduced by a computerized system and is conform to the original		Heat No.: 129308	Cta's job: LC0000910	Date: 08/05/2024
Customer :	ROSETTI MARINO SPA	P.O. No.: PO: 1724000838 123A90A REV.1		Item: 40

TUBOS REUNIDOS GROUP, S.L.U

Barrio Sagarribai, 2 - 01470 AMURRIO (Spain)
Mill: TUBOS

QUALITY MANAGEMENT SYSTEM certified by LRQA

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CERTIFICADO DE CALIDAD
MILL TEST CERTIFICATE

Nº 0000360564/1 Rev. 001

ENSAYOS NO DESTRUCTIVOS / NON DESTRUCTIVE TESTS

ENSAYO / TEST	%CONTROL / TEST RATE(%)	REQUISITOS / REQUIREMENTS	RESULTADO / RESULT
VISUAL Y DIMENSIONAL/ VISUAL & DIMENSIONAL INSP.	100%		O.K.
P.HIDROSTATICA/ HYDROTEST	100%	2.500,0 PSI 5 SEC.	O.K.
CORRIENTES INDUCIDAS/ EDDY CURRENTS	100%	ASTM E 309,N12.5/DRILL HOLE	O.K.
MAGNETISMO RESIDUAL/ RESIDUAL MAGNETISM		MAX 20,0 GAUSS	

ENSAYOS TECNOLÓGICOS Y METALÚRGICOS / TECHNOLOGICAL AND METALLURGICAL TEST

APLASTADO / FLATTENING — AC/ A/SA333 -OK

ANALISIS DE COLADA / CAST ANALYSYS

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	V	Al	Ti	Nb	B	C.E.
MIN.		0,29	0,10												
MAX.	0,18	1,30	0,30	0,025	0,0100	0,400		0,1200	0,4000	0,0500	0,0400	0,0200	0,0200	0,0005	0,42
129308	0,0990	1,05	0,22	0,010	0,0017	0,060	0,080	0,0200	0,2300	0,0040	0,0250	0,0010	0,0020	0,0003	0,31

ANALISIS DE PRODUCTO / PRODUCT ANALYSIS

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	V	Al	Ti	Nb	B	C.E.
MIN.		0,29	0,10												
MAX.	0,18	1,30	0,30	0,025	0,0100	0,400		0,1200	0,4000	0,0500	0,0400	0,0200	0,0200	0,0005	0,42
129308	0,1010	1,05	0,23	0,010	0,0016	0,060	0,080	0,0200	0,2300	0,0040	0,0240	0,0010	0,0030	0,0003	0,31
129308	0,1010	1,05	0,23	0,010	0,0018	0,060	0,080	0,0200	0,2300	0,0040	0,0240	0,0010	0,0030	0,0003	0,31

FORMULAS

	(01)	(02)
MIN.		
MAX.	0,600	0,220
129308	0,318	0,180
129308	0,318	0,180

(01) Cr + Mo + Cu + Nb + V + Ti
(02) Pcm: C + Si/30 + (Cr + Mn + Cu)/20 + Ni/60 + Mo/15 + V/10 + 5*B

AMURRIO 26.04.2023

CONTROL DE CALIDAD DE TUBOS REUNIDOS GROUP
Mill: TUBOS
TUBOS REUNIDOS GROUP (QUALITY CONTROL)

Borja Iguiñabal
P.O.:

CTA Group	Kg 16	Mt 6,91	Pz No.: 1
This document is reproduced by a computerized system and is conform to the original	Heat No.: 129308	Cta's job: LC0000910	Date: 08/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000838 123A90A REV.1		Item: 40

TUBOS REUNIDOS GROUP, S.L.U

Barrio Sagarribai, 2 - 01470 AMURRIO (Spain)
Mill: TUBOS

QUALITY MANAGEMENT SYSTEM certified by LRQA

EN 10204:2004 / 3.1

CERTIFICADO DE CALIDAD
MILL TEST CERTIFICATE

Nº 0000360564/1 Rev. 001

ENSAYOS DE TRACCIÓN / TENSILE TEST

COLADA CAST	Nº	TA	L/T (1)	TP (2)	DIMENSION (mm)	L.ELAST. YIELD POINT (Mpa) (3)	R.TRACC. T.STRENGTH (Mpa)	ALARG. ELONG. (%) F (4)	Estricción Reduction of Area (%)	DUREZA HARDNESS (HB)			MEDIA MEAN	E / R
MIN.						240	415							
MAX.													200	0,85
129308	1		L	T	26,70 x 4,300	365	501	47		143	147	147	146	0,73
129308	2		L	T	26,40 x 4,100	357	510	46		145	147	147	146	0,70
129308	3		L	T	26,60 x 4,200	372	509	47		146	145	147	146	0,73
129308	4		L	T	26,80 x 4,100	360	495	46		147	147	146	147	0,73
129308	5		L	T	26,80 x 4,400	352	512	46		145	146	147	146	0,69
129308	6		L	T	26,40 x 4,400	370	499	47		148	148	144	147	0,74
129308	7		L	T	26,90 x 4,200	358	508	48		145	148	145	146	0,70
129308	8		L	T	26,50 x 4,500	362	496	45		146	147	147	147	0,73
129308	9		L	T	26,50 x 4,300	371	511	45		147	145	144	145	0,73
129308	10		L	T	26,60 x 4,100	361	507	47		148	145	146	146	0,71
129308	11		L	T	26,50 x 4,400	352	496	45		148	146	145	146	0,71
129308	12		L	T	26,70 x 4,000	363	499	46		147	147	145	146	0,73
129308	13		L	T	26,60 x 4,200	370	501	46		148	147	147	147	0,74
129308	14		L	T	26,70 x 4,300	354	510	46		145	148	148	147	0,69
129308	15		L	T	26,60 x 4,300	373	511	45		147	145	145	146	0,73
129308	16		L	T	26,50 x 4,400	369	508	48		145	145	147	146	0,73
129308	17		L	T	26,80 x 4,100	352	496	48		147	146	146	146	0,71
129308	18		L	T	26,40 x 4,400	370	498	47		148	148	148	148	0,74
129308	19		L	T	26,50 x 4,300	368	504	45		148	147	148	148	0,73
129308	20		L	T	26,40 x 4,500	350	508	46		145	147	146	146	0,69
129308	21		L	T	26,70 x 4,200	360	501	46		147	145	147	146	0,72
129308	22		L	T	26,70 x 4,000	372	510	46		145	147	146	146	0,73
129308	23		L	T	26,50 x 4,100	363	496	46		147	147	147	147	0,73
129308	24		L	T	26,70 x 4,100	362	506	45		148	148	145	147	0,72
129308	25		L	T	26,60 x 4,400	372	498	45		146	146	148	147	0,75
129308	26		L	T	26,50 x 4,400	365	504	47		145	145	147	146	0,72

(1) : L = LONGITUDINAL // T = TRANSVERSAL
(2) : T = Full size tube // P = Strip specimen // C = Cylindrical // F = Flat specimen
(3) : yield point (0,2%)
(4) : F = (Lo = 2" (50 mm)) // P = (Proporcional = 5,65 x So½)

LA SOCIETÉ TUBOS REUNIDOS GROUP, S.L.U GARANTIT QUE TOUS LES PRODUITS OBJECT DE CETTE CERTIFICAT, SONT CONFORMES EN LEUR TOTALITÉ LES SPECIFICATIONS DE L'ARTICLE 15 DE L'ARRETE MINISTERIEL DU 24.03.1978 C'EST A DIRE:
C < = 0.25% ; P < = 0.05% ; S < = 0.05%.
Rm < = 700 MPa. ; Rm (A-2) > = 10500
RE/Rm < = 0.9 ; A (5.65 sqr(So)) > = 16% LONG. ; A (5.65 sqr(So)) > = 14% TRANSV.

ANEXOS / ANNEX

FULLY KILLED
RADIATION FREE
MERCURY FREE
NO WELD REPAIR
FINE GRAIN STEEL
THE STEEL IS CALCIUM TREATED FOR MICROINCLUSION SHAPE CONTROL

AMURRIO 26.04.2023

CONTROL DE CALIDAD DE TUBOS REUNIDOS GROUP
Mill: TUBOS
TUBOS REUNIDOS GROUP (QUALITY CONTROL)
Borja Egurzabal
P.O.:

CTA Group	Kg 16	Mt 6,91	Pz No.: 1
This document is reproduced by a computerized system and is conform to the original	Heat No.: 129308	Cta's job: LC0000910	Date: 08/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000838 123A90A REV.1		Item: 40

TUBOS REUNIDOS GROUP, S.L.U

Barrio Sagarribai, 2 - 01470 AMURRIO (Spain)
Mill: TUBOS

QUALITY MANAGEMENT SYSTEM certified by LRQA

EN 10204:2004 / 3.1

CERTIFICADO DE CALIDAD
MILL TEST CERTIFICATE

Nº 0000360564/1 Rev. 001

ANEXOS / ANNEX

T.R.G. HAS A QUALITY MANAGEMENT SYSTEM APPROVED BY LRQA IN
AGREEMENT WITH POINT 4.3 ANNEX I OF THE PED 2014/68/EU"

WE CERTIFY THAT THE PIPES HAVE NOT BEEN IMPACT TESTED DUE TO WALL THICKNESS AND PIPE OD.
TEST SPECIMENS HAVE NOT BEEN ABLE TO BE MACHINED AS PER ASTM A370 PARAGRAPHS 23.2.2.3 & 23.2.2.4.
EVEN THOUGH, IF A SAMPLE OF THE MATERIAL COULD HAVE BEEN OBTAINED IT WOULD HAVE MET THE IMPACT TESTI

AMURRIO 26.04.2023

CONTROL DE CALIDAD DE TUBOS REUNIDOS GROUP
Mill: TUBOS
TUBOS REUNIDOS GROUP (QUALITY CONTROL)
Borja Aguirzabal
P.O.:

CTA Group	Kg 960	Mt 301	Pz No.: 50
This document is reproduced by a computerized system and is conform to the original	Heat No.: 1234196	Cta's job: LC0000910	Date: 08/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000838 123A90A REV.1		Item: 50

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВ "ІНТЕРПАЙП НІКО ТЬЮБ" Україна,
м.Нікополь, пр.Трубників, 56
Тел./факс +38(0566)639-379LLC "INTERPIPE NIKO TUBE", UKRAINE,
Nikopol, 56, Trubnikov ave,
Tel./fax +38(0566)639-379

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24A2938 (A03)
Аркуш / Page 1
Аркушів / Pages 4
Дата / Data 15.01.2024

Вантажоодержувач/ Consignee (A08.1) Commerciale Tubi Acciaio S.p.a. Viale Lidice,40, 10095 Grugliasco (TO), ITALY	Контракт №/ Contract # (A07) COC23/2234
	Заводське замовлення/Production order # (A08) 23-010401
Країна/ Country (A08.1) Italy	№ замовлення клієнта/ Customers ref # (A09) PO#SM30121/OS0000108
Транспортний засіб/ Vehicle № BK3700BA/BK5369XT	

(B01,B02,B03) Стан постачання / Dellivery condition	Труби сталеві безшовні гарячекатані для трубопроводів/Seamless steel hot-rolled pipes for pipelines
	ASTM A333/A333M-2018/ ASME SA333/SA333M-2019/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015
	6
	Труби обрізані під прямим кутом./Pipes are cut off under a right angle.
	Кінці труб оснащені пластиковими протекторами./The ends of pipes are equipped by plastic protectors.
	Труби покриті лаком./Pipes are coated with varnish.

Додаткова інформація/Additional information
Твердість відповідає вимогам NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB)./Hardness meets the requirements NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB).
Виробник труб гарантує роботу удару на основі статистичних даних (18J min/KV -45°C) результатів випробувань на повнорозмірних зразках./The manufacturer of pipes guarantles impact value on the basis of statistical data (18J min/KV -45°C) considering full-size sample testing results.

Термообробка/Heat treatment
Труби виготовлені шляхом гарячої деформації і нормалізовані при температурі 845... 945 град., охолодження на повітрі./Pipes produced by Hot Forming followed by normalizing at the temperature 845 deg C to 945 deg C cooled at air.

№ поз. Item No	(B07.4) Номер пакунка Bundle#	(B07.3) Номери труб Pipe#	(B07.1) Номер плавки Heat#	(B07.2) Номер партії Inspection Lot#	(B09) Зовнішній діаметр OD	(B09) Товщина стінки WT	(B010) Довжина Length	(B11) Загальна довжина Total length	(B08) штуки pieces	(B13) Фактична вага Actual weight	
										брутто gross	нетто net
					мм mm	мм mm	м m	м m		кг kg	кг kg
1	24-12-00407	101-200	1234196	303	33,4	4,55	6,00-6,10	603,85	100	1935	1925
2	24-12-00409	301-346	1234196	309	33,4	4,55	6,00-6,10	277,71	46	882	872
				NPS 1	**Sch 80 XS**	**РАЗОМ/TOTAL**		**881,56**	**146**	**2817**	**2797**
						ПАКУНКІВ/BUNDLES 2					

CTA Group	Kg 960	Mt 301	Pz No.: 50
This document is reproduced by a computerized system and is conform to the original	Heat No.: 1234196	Cta's job: LC0000910	Date: 08/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000838 123A90A REV.1		Item: 50

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВ "ІНТЕРПАЙП НІКО ТЬЮБ" Україна,
м.Нікополь, пр.Трубників, 56
Тел./факс +38(0566)639-379LLC "INTERPIPE NIKO TUBE", UKRAINE,
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE
EN 10204-2004/3.1 (A02)

No : 24A2938 (A03)
Аркуш / Page 2
Аркушів / Pages 4
Дата / Data 15.01.2024

(C71) **Хімічний склад по сертифікатним даним на заготівку в % /Heat analysis acc.to the billet manufacturer certificate %**

(B07.1) Номер плавки Heat #	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000
min	-	-	-	-	-	-	-	-	-	-	-	-	-
max	-	-	-	-	-	-	-	-	-	-	-	-	-
1234196	17.1	98.7	21.9	4	10	8.1	11.5	19.9	11	4	3	2	28

НД на заготівку/Normative documentation for billets	ТУ №18-2023
Завод виробник/Plant - manufacturer	"Дніпросталь"/"MP"DNEPROSTEEL"LLC
(C70)	Сталь вироблена методом плавління в електродуговій печі з подальшим безперервним розливом. Сталь повністю розкислена та дрібнозерниста. Сталь розкислена алюмінієм. Заготовка виготовлена з чавуну та сталі на ТОВ «МЗ Дніпросталь» (ЄДРПОУ номер 33718431) за адресою: Україна, м. Дніпро, вул. Дніпросталівська 4/ The steel is produced by melting in an electric arc furnace followed by continuous casting. The steel is fully killed and fine-grained. The steel is killed with aluminium. The billet is made of cast iron and steel at "MP"DNEPROSTEEL"LLC (USREOU number 33718431) at the following address: 4, Dneprostalivska Str., Dnipro, Ukraine.
(C93-C99)	Не містить жодних матеріалів або компонентів, що походять з Росії, Білорусі, окупованих територій України (Крим, Донецька, Луганська, Херсонська, Запорізька області), Ірану, Сирії, Північної Кореї чи будь-якої іншої санкційної юрисдикції. Митний код: заготовка, одержана безперервним литтям, кругла, з нелегованої сталі, з масовою часткою вуглецю менш як 0,25 % - 720719/ Does not contain any materials or components originating from Russia, Belarus, the occupied territories of Ukraine (Crimea, Donetsk, Luhansk, Kherson, Zaporizhzhia regions), Iran, Syria, North Korea or any other sanctioned jurisdiction. Customs code: The billets produced by continuous casting, round, of unalloyed steel with a mass fraction of carbon less than 0.25% – 720719

(C72) **Результати контролю хімічного складу металa труб/Results of chemical analysis of pipes**

(B07.1) Номер плавки Heat #	Номер партії Lot#	(C00.1) зразок Test piece	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000
min			-	-	-	-	-	-	-	-	-	-	-	-	-
max			-	-	-	-	-	-	-	-	-	-	-	-	-
1234196		1	17	98	20	5	8	8	10	19	10	3	1	1	31
		2	16	95	20	5	7	8	10	19	10	3	1	1	31

CTA Group	Kg 960	Mt 301	Pz No.: 50
This document is reproduced by a computerized system and is conform to the original	Heat No.: 1234196	Cta's job: LC0000910	Date: 08/05/2024
Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000838 123A90A REV.1		Item: 50

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВ "ІНТЕРПАЙП НІКО ТЬЮБ" Україна,
м.Нікополь, пр.Трубників, 56
Тел./факс +38(0566)639-379LLC "INTERPIPE NIKO TUBE", UKRAINE,
Nikopol, 56, Trubnikov ave.
Tel./fax +38(0566)639-379

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 24A2938 (A03)
Аркуш / Page 3
Аркушів / Pages 4
Дата / Data 15.01.2024

Результати випробувань труб - Test results for pipes

Випробування на розтягнення/ Tensile test ASTM A370

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності t0,5 Yield strength t0,5	(C11) Межа плинності t0,5 Yield strength t0,5 t=	(C13) Відносне подовження Elongation 50	(C13) Відносне подовження Elongation 50 t=	(C16) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of slip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		415	-	240	-	24,0	-	-	-	-				
max		-	-	-	-	-	-	-	-	-				
1234196	303	575	-	390	-	30,0	-	-	-	-	L	19		50
1234196	303	575	-	395	-	31,0	-	-	-	-	L	19		50
1234196	303	580	-	400	-	32,0	-	-	-	-	L	19		50
1234196	303	580	-	400	-	32,0	-	-	-	-	L	19		50
1234196	303	580	-	395	-	33,0	-	-	-	-	L	19		50
1234196	303	570	-	395	-	33,0	-	-	-	-	L	19		50
1234196	303	580	-	405	-	30,0	-	-	-	-	L	19		50
1234196	303	575	-	395	-	33,0	-	-	-	-	L	19		50
1234196	303	565	-	390	-	33,0	-	-	-	-	L	19		50
1234196	303	570	-	390	-	32,0	-	-	-	-	L	19		50
1234196	309	570	-	395	-	30,0	-	-	-	-	L	19		50
1234196	309	560	-	385	-	29,0	-	-	-	-	L	19		50
1234196	309	570	-	395	-	32,0	-	-	-	-	L	19		50
1234196	309	560	-	385	-	32,0	-	-	-	-	L	19		50
1234196	309	560	-	385	-	30,0	-	-	-	-	L	19		50
1234196	309	560	-	380	-	32,0	-	-	-	-	L	19		50
1234196	309	555	-	385	-	31,0	-	-	-	-	L	19		50
1234196	309	555	-	390	-	30,0	-	-	-	-	L	19		50
1234196	309	560	-	385	-	31,0	-	-	-	-	L	19		50
1234196	309	565	-	390	-	33,0	-	-	-	-	L	19		50
1234196	309	565	-	390	-	32,0	-	-	-	-	L	19		50
1234196	309	565	-	395	-	33,0	-	-	-	-	L	19		50
1234196	309	555	-	380	-	31,0	-	-	-	-	L	19		50
1234196	309	565	-	395	-	30,0	-	-	-	-	L	19		50
1234196	309	560	-	390	-	29,0	-	-	-	-	L	19		50
1234196	309	555	-	385	-	32,0	-	-	-	-	L	19		50
1234196	309	565	-	400	-	31,0	-	-	-	-	L	19		50
1234196	309	555	-	385	-	33,0	-	-	-	-	L	19		50
1234196	309	565	-	390	-	30,0	-	-	-	-	L	19		50
1234196	309	565	-	395	-	30,0	-	-	-	-	L	19		50

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen

CTA Group	Kg 960	Mt 301	Pz No.: 50
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Customer : ROSETTI MARINO SPA	P.O. No.: PO: 1724000838 123A90A REV.1		Item: 50

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

(A03)
No : 24A2938
Аркуш / Page 4
Аркушів / Pages 4
Дата / Data 15.01.2024

(C30) **Твердість / Hardness test temperature +20°C**

(B07.1) Номер плавки	(B07.2) Номер партії	HRB				HRC	HB				HV				
		(C31.1)	(C31.1)	(C31.1)	(C32.1)	(C31.2)	(C31.3)	(C31.3)	(C31.3)	(C31.3)	(C31.4)	(C31.4)	(C31.4)	(C31.4)	(C32.4)
Heat #	Lot #	1	2	3	ср.знач./av.		1	2	3	ср.знач./av.	1	2	3	4	ср.знач./av.
min		-	-	-	-	-	-	-	-	-	-	-	-	-	-
max		100	100	100	100	22	-	-	-	-	-	-	-	-	-
1234196	303	86	87	85	86	<22	-	-	-	-	-	-	-	-	-
1234196	309	86	86	85	86	<22	-	-	-	-	-	-	-	-	-

(C50,055)
Інші види контролю / Other tests

Вид випробування/ Type of test	Параметри/ Criteria		Результати контролю/ Test results
Сплющування/ Flattening tes	Труби пройшли випробування на сплющування./Pipes passed flattening test.	100%	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic tes	17,0MPa/5sec.	100%	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-destructive inspection full length bod	Метод контролю:/Method:/Вихретоковий контроль:/Eddy current inspection:/Наскрізний отвір діаметром 1.4 мм./Drilled hole with diameter 1.4 mm.	100%	Задовільно / Satisfactory
Візуальний контроль/ Visual inspectio	Вироби піддавалися візуальному огляду і контролю розмірів. / Visual and dimensional test is satisfactory.	100%	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspectio	За стандартом./As per Standard.	100%	Задовільно / Satisfactory

(A04,B06)
Маркування фарбою/ Marking paint
{Логотип полный} ASTM A333/A333M/ASME SA333/SA333M/ANSI/NACE MR0175/ISO 15156-2/ANSI/NACE MR0103/ISO 17945 33,4 4,55 6 HF SMLS {HEAT} 17,0MPA {длина трубы в метрах до двух десятичных знаков} {Вес трубы в кг} NPS 1 SCH 80 XS PO#SM30121/OS0000108 {Номер трубы} {месяц год} {Тип покрытия}

(Z01)
Труби виготовлені і випробувані відповідно до вимог ASTM A333/A333M-2018/ ASME SA333/SA333M-2019/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 і замовлення / Pipes were produced and inspected according to requirements of ASTM A333/A333M-2018/ ASME SA333/SA333M-2019/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 and order's requirements

(A05,Z02,Z03)

Дата/Data	
15.01.2024	Підпис особи, відповідальної за видачу сертифікату /Signature of Certificate Ispector Васюк Я.В./Vasyuk Ya.V.
INTERPIPE 85	

Вказівка в дужках відповідає кодам згідно EN 10168 /Indication in parentheses correspond to sttributes according to EN 10168.

(Z05)
Ваші пропозиції щодо поліпшення продукції просимо надсилати на ел.адресу / Please send Your proposals for improving the product by e-mail or fax or by phone info@ nistp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379. e-mail: info@ua.interpipe.biz Phone: +38 (056)74-74-066 Fax: +38(056)770-20-01 Цей інспекційний сертифікат стосується лише перерахованої в ньому продукції. Неприпустимо внесення змін або інше неправомірне використання сертифіката. /This inspection certificatels only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution

Сертификат №24A2938 выдан взамен сертификата №24A398 от 15.01.2024 / Certificate No 24A2938 was issued to replace certificate No 24A398 dated 15.01.2024

SIDERTEST
mechanical chemical non destructive tests
Head Office: Strada della Barimella, 1/B - 29015 Castel San Giovanni(PC) ITALY
U.O. Plant B: Viale dell'Industria, 25 - 29015 Castel San Giovanni(PC) ITALY
Tel. +39 0523 881900 Fax. +39 0523 842903 sidertest@sidertest.it www.sidertest.it

Verifica di Autenticità/ Authenticity Verification

RAPPORTO DI PROVA/ TEST REPORT

PM 6847 / 24

Rif. Lab SIM (FCP): **2306 / 24 (A / A)**

LAB N° 0864 L

Cliente/ Customer: **Commerciale Tubi Acciaio Spa Viale Lidice 38-40-42 10095 Grugliasco TO**

Ordine/ Order: **DP 24059**

Commessa/ Job:

Campione fornito da cliente/ Sample supplied by customer :Parte del prodotto finito/ part of finished product

Descrizione/ Description	Qta/ Qty	Posizione/ Item	Prova Nr./ Test Nr.	Colata/ Heat	Materiale/ Material
PIPE Ø 1" W.T. 4.55 mm	1		1234196	1234196	ASTM A 333-18 Gr. 6

PROVA DI RESILIENZA/ Notched-bar impact test [Decision rule: Qn]

ID Prova/ ID Specimen	Metodo di prova/ Test method	Specifica/ Specification	Dimensioni/ Dimension mm *Size Width Lenght*	Posizione di prelievo/ Test position	Tipo/ Type	Temp./ Temp. °C	Energia Nominale/ Nominal Energy 750 #Fondoscala/ Full Scale									Data esecuzione/ Date of Testing
							Energia Assorbita/ Absorbed energy J Valore singolo/ Single Value			Media/ Average	Area di taglio/ Shear area % Valore singolo/ Single Value		Average	Espansione laterale/ Lateral expansion mm Valore singolo/ Single Value		Media/ Average	
36984	ASTM A370 – 22 § 20+29	DP 24059	2,5 x 10 x 55	B L 1/2	KVs	-50	17,3	14,3	16,3	16,0						25/03/2024

Thermal conditioning with Cryostat and ethyl alcohol(time: min 5 minutes)

Esito/ Conclusion: Requisiti non specificati/ Unspecified requirements

ITEM 50

I risultati presenti in questo rapporto di prova si riferiscono al solo campione così come ricevuto dal Cliente, che esegue il campionamento, salvo in caso di trattamenti termici effettuati dal Laboratorio. I campi in blu sono forniti dal cliente. La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. Dichiarazioni false, fittizie o fraudolente o modifiche del presente rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. Il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta. Il Laboratorio non è responsabile dei dati forniti dal cliente che possono influenzare la validità dei risultati./ This test report refers only to the examined sample as received from the Customer, except in case of heat treatments carried out by the Laboratory. Clients are in charge of sampling. Blue fields are supplied by the Client.Compliance with documents in "Specification" refers only to the tests described on this test report.The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA. Any false statement or modification of this test report is a violation of law and the Laboratory may take legal action.This test report cannot be partially reproduced without our written approval. Laboratory is not responsible for information supplied by the customer which can affect the validity of the result.

Data Ingresso Materiale/ Date of Material Arrival	Responsabile di Reparto o sostituto/ Department Manager or Deputy	Responsabile Laboratorio o Sostituto/ Laboratory Manager or Deputy	Ispettori/ Inspector	Cliente/ Customer
21/03/2024	Morresi Davide	Amani Paolo		
Data Rapporto di prova/ Test Report Date: 25/03/2024				

DECISION RULE:
- Ql — Qualitative
- Qs — Semi-quantitative
- Qn — Quantitative (With Implicit Uncertainty)
- Qx — Quantitative (With Explicit Uncertainty) - the uncertainty is reported in the test report and is used for conformity assessment.

The result can be COMPLIANT or NOT COMPLIANT

Test Position Legend: [1/2]-1/2 thickness; [B]-Specimen in Base Material; [L]-Long.

CARBON EQUIVALENT CERTIFICATE

DATE	12/04/2024
NR.	CEG 24017

Viale LIDICE 40 - 10095 GRUGLIASCO (Torino) - Italy- Tel +39 011 3145111- Fax +39 011 3145140 - e-mail: control.quality@ctaspa.com - web site: www.ctagroupwebsite.com

CUSTOMER	ROSETTI MARINO SPA			REF.CUSTOMER	P.O. :1724000838 123A90A REV.1
INT JOB NR	LC 910			PRODUCT	SMLS LOW CARBON STEEL PIPES
O.D.	1	W.T.	4,55 mm	ITEM	50

CHEMICAL COMPOSITION

mtc	Heat	MATERIAL DESCRIPTION	C	Mn	Cr	Mo	V	Ni	Cu						Ceq (If-IIW)
24A2938	1234196	ASTM / ASME A/SA 333 Gr 6 - NACE MR 0175- 0103	0,171	0,987	0,081	0,011	0,03	0,115	0,19						0,38
															0,00
															0,00

REMARKS

This value is calculate with long formula Ce=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 as per mill test heat analisis attached issued by Manufacturer

SIGNATURE

ISSUED BY	VERIFIED BY		
COMMERCIALE TUBI ACCIAIO S.p.A. ANGELO FAVINI QUALITY CONTROL DEPARTMENT	COMMERCIALE TUBI ACCIAIO S.p.A.		

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	1 / 29
Date / Data: December 04, 2023	

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: COMMERCIALE TUBI ACCIAIO SPA	Customer's Order Item / Comanda clientului - Item: SM30076/OS0000073	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: 2261185/010
Manufacture Process / Proces de fabricatie: NORMALIZED / NORMALIZATE	Product Type / Tip de produs: See note nr.1 / vezi nota nr.1		Surface / Suprafata: See note nr.2 / vezi nota nr.2
Standard or Specification / Norma sau specificatie: NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1, / NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,		Steel Grade / Grad de otel: See note nr.3 / vezi nota nr.3	Ends / Capete: SQUARE CUT / CAPETE NETEDE (TAIATE DREPT)
Dimensions / Dimensiuni: ø.840" O.D. x .147" W.T. / ø21.30mm O.D. x 3.73mm W.T.	Schedule / Program: 80 / .	Length / Lungime: 16.404 ft ÷ 21.982 ft / 5000 mm ÷ 6700 mm	Quantity / Cantitate: 1951Pcs/buc. 42321'02" ft 45642,2 lb / 12899.48 mt 20703 kg	Nominal Weight / Greutate nominala: 1.09 lb/ft / 1.62 Kg/m

DELIVERY NOTES / NOTE DE LIVRARE

Delivery Notes / Note de livrare
Job Number / Nr. Comanda interna: 0031372178 / 000230
Shipping Note / Aviz de expeditie: 0105589615 - 04/12/2023
Address / Adresa: VIALE LIDICE, 40

Delivery Notes / Note de livrare	
Town / Oras:	10095 GRUGLIASCO.
Country / Tara:	Italy

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta Ls	Sc	Type / Tip	Ori	Specimen dimensions / Dimensiuni epruvetelor Size / Dimensiune	Area / Sectiune	Test temp. / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: –	U.T.S. Req. Min: 415.00 Max: –	Elongation / Alungire Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720279	K3481/A	B	AM	Ss	L	3.67 x 21.00	199.80	+20	358.00	454.00	2"	50.8	22.0%	41.0%
720279	K3482/A	B	AM	Ss	L	3.69 x 21.00	200.70	+20	419.00	473.00	2"	50.8	22.0%	38.0%
720279	K3483/A	B	AM	Ss	L	3.74 x 20.97	202.40	+20	408.00	457.00	2"	50.8	22.0%	39.0%
720279	K3484/A	B	AM	Ss	L	3.58 x 21.18	197.90	+20	407.00	463.00	2"	50.8	22.0%	41.0%
720279	K3485/A	B	AM	Ss	L	3.86 x 21.21	210.40	+20	331.00	440.00	2"	50.8	22.0%	41.0%
720279	K3486/A	B	AM	Ss	L	3.72 x 20.99	201.80	+20	409.00	463.00	2"	50.8	22.0%	40.0%
720279	Q7306/A	B	AM	Ss	L	3.56 x 21.30	198.40	+20	350.00	464.00	2"	50.8	22.0%	45.0%
720279	Q7307/A	B	AM	Ss	L	3.74 x 21.30	206.30	+20	341.00	448.00	2"	50.8	22.0%	38.0%
720279	Q7308/A	B	AM	Ss	L	3.70 x 21.40	205.70	+20	305.00	442.00	2"	50.8	22.0%	48.0%
720279	Q7309/A	B	AM	Ss	L	3.67 x 21.42	204.70	+20	351.00	450.00	2"	50.8	22.0%	31.0%
720279	Q7310/A	B	AM	Ss	L	3.78 x 21.35	208.60	+20	293.00	426.00	2"	50.8	22.0%	48.0%
720279	Q7311/A	B	AM	Ss	L	3.74 x 21.37	207.10	+20	347.00	445.00	2"	50.8	22.0%	34.0%

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Customer : ROSETTI MARINO SPA

Kg 11

Heat No.: 720280

Mt 6,63

P.O. No.: PO: 1724000838 123A90A REV.1

Cta's job: LC0000910

Pz No.: 1

Item: 60

Date: 08/05/2024

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	2 / 29

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta				Specimen dimensions / Dimensiuni epruvetelor		Test temp / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: –	U.T.S. Req. Min: 415.00 Max: –	Elongation / Alungire			
		Ls	Sc	Type / Tip	Ori	Size / Dimensiune	Area / Sectiune				Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720279	Q7312/A	B	AM	Ss	L	3.59 x 21.36	200.40	+20	316.00	464.00	2"	50.8	22.0%	29.0%
720279	Q7313/A	B	AM	Ss	L	3.73 x 21.34	206.40	+20	336.00	446.00	2"	50.8	22.0%	45.0%
720279	Q7314/A	B	AM	Ss	L	3.75 x 21.31	206.90	+20	306.00	449.00	2"	50.8	22.0%	32.0%
720279	Q7315/A	B	AM	Ss	L	3.78 x 21.25	207.50	+20	308.00	446.00	2"	50.8	22.0%	39.0%
720279	Q7316/A	B	AM	Ss	L	3.64 x 21.41	203.20	+20	323.00	453.00	2"	50.8	22.0%	42.0%
720279	Q7317/A	B	AM	Ss	L	3.61 x 21.25	200.10	+20	359.00	461.00	2"	50.8	22.0%	30.0%
720279	Q7318/A	B	AM	Ss	L	3.62 x 21.40	202.20	+20	316.00	458.00	2"	50.8	22.0%	45.0%
720279	Q7319/A	B	AM	Ss	L	3.95 x 21.36	216.00	+20	313.00	447.00	2"	50.8	22.0%	34.0%
720279	Q7320/A	B	AM	Ss	L	3.66 x 21.35	203.40	+20	341.00	452.00	2"	50.8	22.0%	47.0%
720279	Q7321/A	B	AM	Ss	L	3.85 x 21.42	212.50	+20	288.00	419.00	2"	50.8	22.0%	48.0%
720279	Q7322/A	B	AM	Ss	L	3.75 x 21.28	206.50	+20	336.00	445.00	2"	50.8	22.0%	43.0%
720279	Q7323/A	B	AM	Ss	L	3.67 x 21.30	203.30	+20	341.00	452.00	2"	50.8	22.0%	46.0%
720279	Q7324/A	B	AM	Ss	L	3.75 x 21.28	206.50	+20	348.00	446.00	2"	50.8	22.0%	31.0%
720279	Q7325/A	B	AM	Ss	L	3.75 x 21.31	206.90	+20	296.00	430.00	2"	50.8	22.0%	46.0%
720279	Q7326/A	B	AM	Ss	L	3.67 x 21.40	204.40	+20	304.00	446.00	2"	50.8	22.0%	50.0%
720279	Q7327/A	B	AM	Ss	L	3.72 x 21.35	206.00	+20	312.00	456.00	2"	50.8	22.0%	35.0%
720279	Q7328/A	B	AM	Ss	L	3.63 x 21.33	201.90	+20	330.00	445.00	2"	50.8	22.0%	39.0%
720279	Q7329/A	B	AM	Ss	L	3.87 x 21.32	212.20	+20	321.00	439.00	2"	50.8	22.0%	29.0%
720279	Q7330/A	B	AM	Ss	L	3.63 x 21.30	201.50	+20	356.00	457.00	2"	50.8	22.0%	34.0%
720279	Q7331/A	B	AM	Ss	L	3.63 x 21.29	210.10	+20	330.00	438.00	2"	50.8	22.0%	50.0%

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Customer : ROSETTI MARINO SPA

P.O. No.: PO: 1724000838 123A90A REV.1	Heat No.: 720280	Kg 11	
	Cia's job: LC0000910	Mt 6,63	
Item: 60	Date: 08/05/2024	Pz No.: 1	

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	**3 / 29**
Date / Data: **December 04, 2023**	

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661561

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta				Specimen dimensions / Dimensiuni epruvetelor		Test temp / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: –	U.T.S. Req. Min: 415.00 Max: –	Elongation / Alungire			
		Ls	Sc	Type / Tip	Ori	Size / Dimensiune	Area / Sectiune				Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720279	Q7332/A	B	AM	Ss	L	3.64 x 21.34	202.40	+20	336.00	460.00	2"	50.0	22.0%	30.0%
720279	Q7333/A	B	AM	Ss	L	3.65 x 21.35	203.00	+20	337.00	488.00	2"	50.0	22.0%	41.0%
720279	Q7334/A	B	AM	Ss	L	3.79 x 21.40	209.70	+20	323.00	439.00	2"	50.0	22.0%	46.0%
720279	Q7335/A	B	AM	Ss	L	3.70 x 21.36	205.30	+20	375.00	519.00	2"	50.0	22.0%	29.0%
720279	Q7336/A	B	AM	Ss	L	3.45 x 21.37	194.20	+20	326.00	479.00	2"	50.0	22.0%	31.0%
720279	Q7337/A	B	AM	Ss	L	3.59 x 21.36	200.40	+20	320.00	469.00	2"	50.0	22.0%	36.0%
720279	Q7338/A	B	AM	Ss	L	3.75 x 21.26	206.30	+20	336.00	446.00	2"	50.0	22.0%	44.0%
720279	Q7339/A	B	AM	Ss	L	3.54 x 21.21	196.50	+20	324.00	465.00	2"	50.0	22.0%	35.0%
720279	Q7340/A	B	AM	Ss	L	3.81 x 21.28	209.10	+20	302.00	446.00	2"	50.0	22.0%	42.0%
720279	Q7341/A	B	AM	Ss	L	3.72 x 21.37	206.30	+20	315.00	459.00	2"	50.0	22.0%	36.0%
720279	Q7342/A	B	AM	Ss	L	3.65 x 21.38	203.30	+20	353.00	439.00	2"	50.0	22.0%	49.0%
720279	Q7343/A	B	AM	Ss	L	3.76 x 21.39	208.30	+20	315.00	442.00	2"	50.0	22.0%	37.0%
720279	Q7344/A	B	AM	Ss	L	3.55 x 21.29	197.80	+20	362.00	475.00	2"	50.0	22.0%	35.0%
720279	Q7345/A	B	AM	Ss	L	3.70 x 21.37	205.40	+20	338.00	448.00	2"	50.0	22.0%	47.0%
720279	Q7346/A	B	AM	Ss	L	3.70 x 21.32	204.80	+20	320.00	449.00	2"	50.0	22.0%	33.0%
720279	Q7347/A	B	AM	Ss	L	3.66 x 21.35	203.40	+20	361.00	453.00	2"	50.0	22.0%	49.0%
720279	Q7348/A	B	AM	Ss	L	3.79 x 21.32	208.70	+20	314.00	456.00	2"	50.0	22.0%	40.0%
720279	Q7349/A	B	AM	Ss	L	3.67 x 21.45	205.00	+20	308.00	441.00	2"	50.0	22.0%	47.0%
720279	Q7350/A	B	AM	Ss	L	3.92 x 21.31	214.20	+20	312.00	455.00	2"	50.0	22.0%	38.0%
720279	Q7351/A	B	AM	Ss	L	3.78 x 21.36	208.80	+20	332.00	441.00	2"	50.0	22.0%	40.0%

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Customer : ROSETTI MARINO SPA
Kg 11
Heat No.: 720280
Mt 6,63
Cta's job: LC0000910
Pz No.: 1
P.O. No.: PO: 1724000838 123A90A REV.1
Item: 60
Date: 08/05/2024

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar: **02-23-29899** | Page / Pagina: **4 / 29**

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd,
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta				Specimen dimensions / Dimensiuni epruvetelor		Test temp / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: –	U.T.S. Req. Min: 415.00 Max: –	Elongation / Alungire			
		Ls	Sc	Type / Tip	Ori	Size / Dimensiune	Area / Sectiune	Temp de incercare			Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720279	Q7352/A	B	AM	Ss	L	3.68 x 21.30	203.70	+20	311.00	456.00	2"	50.0	22.0%	31.0%
720279	Q7353/A	B	AM	Ss	L	3.87 x 21.33	212.30	+20	316.00	462.00	2"	50.0	22.0%	41.0%
720279	Q7354/A	B	AM	Ss	L	3.54 x 21.21	196.50	+20	327.00	465.00	2"	50.0	22.0%	35.0%
720279	Q7355/A	B	AM	Ss	L	3.59 x 21.31	199.90	+20	359.00	461.00	2"	50.0	22.0%	32.0%
720279	Q7356/A	B	AM	Ss	L	3.81 x 21.34	209.80	+20	308.00	447.00	2"	50.0	22.0%	38.0%
720279	Q7357/A	B	AM	Ss	L	3.55 x 21.36	198.60	+20	328.00	474.00	2"	50.0	22.0%	40.0%
720279	Q7358/A	B	AM	Ss	L	3.59 x 21.30	199.70	+20	329.00	476.00	2"	50.0	22.0%	41.0%
720279	Q7359/A	B	AM	Ss	L	3.73 x 21.28	205.70	+20	356.00	456.00	2"	50.0	22.0%	37.0%
720279	Q7360/A	B	AM	Ss	L	3.70 x 21.38	205.50	+20	304.00	443.00	2"	50.0	22.0%	51.0%
720279	Q7361/A	B	AM	Ss	L	3.70 x 21.30	204.60	+20	309.00	442.00	2"	50.0	22.0%	49.0%
720279	Q7362/A	B	AM	Ss	L	3.55 x 21.35	198.50	+20	360.00	471.00	2"	50.0	22.0%	37.0%
720279	Q7364/A	B	AM	Ss	L	3.85 x 21.39	212.10	+20	306.00	446.00	2"	50.0	22.0%	39.0%
720280	Q6883/A	B	AM	Ss	L	3.80 x 21.25	208.30	+20	320.00	435.00	2"	50.0	22.0%	37.0%
720280	Q6884/A	B	AM	Ss	L	3.85 x 21.30	211.10	+20	307.00	449.00	2"	50.0	22.0%	41.0%
720280	Q6885/A	B	AM	Ss	L	3.70 x 21.30	204.60	+20	291.00	435.00	2"	50.0	22.0%	40.0%
720280	Q6886/A	B	AM	Ss	L	3.68 x 21.40	204.90	+20	302.00	446.00	2"	50.0	22.0%	49.0%
720280	Q6887/A	B	AM	Ss	L	3.77 x 21.33	208.00	+20	297.00	435.00	2"	50.0	22.0%	40.0%
720280	Q6888/A	B	AM	Ss	L	3.81 x 21.39	210.40	+20	296.00	439.00	2"	50.0	22.0%	54.0%
720280	Q6889/A	B	AM	Ss	L	3.80 x 21.27	208.60	+20	302.00	445.00	2"	50.0	22.0%	40.0%
720280	Q6890/A	B	AM	Ss	L	3.69 x 21.30	204.10	+20	315.00	460.00	2"	50.0	22.0%	48.0%

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Customer: ROSETTI MARINO SPA

P.O. No.: PO: 1724000838 123A90A REV.1	Heat No.: 720280	Kg 11	Pz No.: 1
	Cta's job: LC0000910	Mt 6,63	
		Date: 08/05/2024	
		Item: 60	

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar: **02-23-29899** | Page / Pagina: **5 / 29**

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661561

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta				Specimen dimensions / Dimensiuni epruvetelor		Test temp / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: –	U.T.S. Req. Min: 415.00 Max: –	Elongation / Alungire			
		Ls	Sc	Type / Tip	Ori	Size / Dimensiune	Area / Sectiune				Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720280	Q6891/A	B	AM	Ss	L	3.62 x 21.20	199.80	+20	341.00	447.00	2"	50.0	22.0%	38.0%
720280	Q6892/A	B	AM	Ss	L	3.80 x 21.32	209.20	+20	304.00	444.00	2"	50.0	22.0%	41.0%
720280	Q6893/A	B	AM	Ss	L	3.62 x 21.37	201.90	+20	312.00	457.00	2"	50.0	22.0%	50.0%
720280	Q6894/A	B	AM	Ss	L	3.82 x 21.33	210.10	+20	298.00	439.00	2"	50.0	22.0%	41.0%
720280	Q6895/A	B	AM	Ss	L	3.75 x 21.32	207.00	+20	299.00	443.00	2"	50.0	22.0%	40.0%
720280	Q6896/A	B	AM	Ss	L	3.73 x 21.35	206.50	+20	301.00	444.00	2"	50.0	22.0%	50.0%
720280	Q6897/A	B	AM	Ss	L	3.73 x 21.35	206.50	+20	313.00	430.00	2"	50.0	22.0%	48.0%
720280	Q6898/A	B	AM	Ss	L	3.69 x 21.38	205.10	+20	308.00	449.00	2"	50.0	22.0%	50.0%
720280	Q6899/A	B	AM	Ss	L	3.59 x 21.32	200.00	+20	308.00	453.00	2"	50.0	22.0%	38.0%
720280	Q6900/A	B	AM	Ss	L	3.72 x 21.46	207.30	+20	301.00	445.00	2"	50.0	22.0%	54.0%
720280	Q6901/A	B	AM	Ss	L	3.70 x 21.36	205.30	+20	300.00	441.00	2"	50.0	22.0%	41.0%
720280	Q6902/A	B	AM	Ss	L	3.76 x 21.37	208.00	+20	301.00	436.00	2"	50.0	22.0%	45.0%
720280	Q6903/A	B	AM	Ss	L	3.62 x 21.21	200.00	+20	313.00	456.00	2"	50.0	22.0%	48.0%
720280	Q6904/A	B	AM	Ss	L	3.83 x 21.30	210.20	+20	302.00	440.00	2"	50.0	22.0%	43.0%
720280	Q6905/A	B	AM	Ss	L	3.64 x 21.39	203.00	+20	300.00	461.00	2"	50.0	22.0%	46.0%
720280	Q6906/A	B	AM	Ss	L	3.83 x 21.27	209.80	+20	309.00	451.00	2"	50.0	22.0%	41.0%
720280	Q6907/A	B	AM	Ss	L	3.50 x 21.30	195.70	+20	322.00	474.00	2"	50.0	22.0%	46.0%
720280	Q6908/A	B	AM	Ss	L	3.55 x 21.22	197.10	+20	312.00	460.00	2"	50.0	22.0%	39.0%
720280	Q6909/A	B	AM	Ss	L	3.59 x 21.24	199.10	+20	331.00	462.00	2"	50.0	22.0%	47.0%
720280	Q6910/A	B	AM	Ss	L	3.83 x 21.31	210.30	+20	309.00	435.00	2"	50.0	22.0%	39.0%

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Customer : ROSETTI MARINO SPA

Kg: 11 | Mt: 6,63 | Pz No.: 1

P.O. No.: PO: 1724000838 123A90A REV.1 | Heat No.: 720280 | Cta's job: LC0000910 | Date: 08/05/2024

Item: 60

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar: **02-23-29899** | Page / Pagina: **6 / 29**

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta: Ls	Sc	Type / Tip	Ori	Specimen dimensions / Dimensiuni epruvetelor: Size / Dimensiune	Area / Sectiune	Test temp / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: –	U.T.S. Req. Min: 415.00 Max: –	Elongation / Alungire: Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720280	Q6911/A	B	AM	Ss	L	3.72 x 21.28	205.20	+20	333.00	455.00	2"	50.0	22.0%	41.0%
720280	Q6912/A	B	AM	Ss	L	3.68 x 21.27	203.40	+20	318.00	436.00	2"	50.0	22.0%	48.0%
720280	Q6913/A	B	AM	Ss	L	3.69 x 21.25	203.60	+20	319.00	442.00	2"	50.0	22.0%	41.0%
720280	Q6914/A	B	AM	Ss	L	3.67 x 21.36	204.00	+20	308.00	436.00	2"	50.0	22.0%	52.0%
720280	Q6915/A	B	AM	Ss	L	3.62 x 21.36	201.70	+20	288.00	430.00	2"	50.0	22.0%	48.0%
720280	Q6916/A	B	AM	Ss	L	3.64 x 21.39	203.00	+20	309.00	455.00	2"	50.0	22.0%	50.0%
720280	Q6917/A	B	AM	Ss	L	3.55 x 21.36	198.60	+20	306.00	450.00	2"	50.0	22.0%	38.0%
720280	Q6918/A	B	AM	Ss	L	3.73 x 21.24	205.20	+20	319.00	442.00	2"	50.0	22.0%	41.0%
720280	Q6919/A	B	AM	Ss	L	3.64 x 21.22	201.00	+20	323.00	473.00	2"	50.0	22.0%	40.0%
720280	Q6920/A	B	AM	Ss	L	3.56 x 21.27	198.10	+20	310.00	459.00	2"	50.0	22.0%	48.0%
720280	Q6921/A	B	AM	Ss	L	3.66 x 21.32	203.10	+20	303.00	446.00	2"	50.0	22.0%	40.0%
720280	Q6922/A	B	AM	Ss	L	3.76 x 21.37	208.00	+20	317.00	435.00	2"	50.0	22.0%	49.0%
720280	Q6924/A	B	AM	Ss	L	3.85 x 21.40	212.30	+20	295.00	438.00	2"	50.0	22.0%	49.0%
720280	Q6925/A	B	AM	Ss	L	3.63 x 21.30	201.50	+20	306.00	450.00	2"	50.0	22.0%	40.0%
720280	Q6926/A	B	AM	Ss	L	3.41 x 21.30	191.70	+20	348.00	477.00	2"	50.0	21.0%	48.0%
720280	Q6927/A	B	AM	Ss	L	3.59 x 21.32	200.00	+20	324.00	444.00	2"	50.0	22.0%	45.0%
720280	Q6928/A	B	AM	Ss	L	3.76 x 21.38	208.10	+20	311.00	426.00	2"	50.0	22.0%	44.0%
720280	Q6929/A	B	AM	Ss	L	3.80 x 21.30	208.90	+20	318.00	440.00	2"	50.0	22.0%	40.0%
720280	Q6930/A	B	AM	Ss	L	3.67 x 21.28	203.00	+20	319.00	437.00	2"	50.0	22.0%	46.0%
720280	Q6931/A	B	AM	Ss	L	3.85 x 21.34	211.50	+20	334.00	435.00	2"	50.0	22.0%	40.0%

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Customer : ROSETTI MARINO SPA
P.O. No.: PO: 1724000838 123A90A REV.1
Heat No.: 720280
Cta's job: LC0000910
Item: 60
Kg 11
Mt 6,63
Date: 08/05/2024
Pz No.: 1

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar: **02-23-29899** | Page / Pagina: **7 / 29**

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta				Specimen dimensions / Dimensiuni epruvetelor		Test temp / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: --	U.T.S. Req. Min: 415.00 Max: --	Elongation / Alungire			
		Ls	Sc	Type / Tip	Ori	Size / Dimensiune	Area / Sectiune				Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720280	Q6932/A	B	AM	Ss	L	3.76 x 21.47	209.20	+20	300.00	423.00	2"	50.0	22.0%	34.0%
720280	Q6933/A	B	AM	Ss	L	3.83 x 21.22	209.20	+20	322.00	436.00	2"	50.0	22.0%	40.0%
720280	Q6934/A	B	AM	Ss	L	3.70 x 21.39	205.60	+20	299.00	440.00	2"	50.0	22.0%	46.0%
720280	Q6935/A	B	AM	Ss	L	3.65 x 21.36	203.10	+20	309.00	458.00	2"	50.0	22.0%	49.0%
720280	Q6936/A	B	AM	Ss	L	3.78 x 21.38	209.00	+20	329.00	447.00	2"	50.0	22.0%	38.0%
720280	Q6937/A	B	AM	Ss	L	3.66 x 21.25	202.30	+20	343.00	453.00	2"	50.0	22.0%	40.0%
720280	Q6938/A	B	AM	Ss	L	3.77 x 21.33	208.00	+20	305.00	444.00	2"	50.0	22.0%	41.0%
720280	Q6939/A	B	AM	Ss	L	3.91 x 21.36	214.30	+20	290.00	423.00	2"	50.0	22.0%	40.0%
720280	Q6940/A	B	AM	Ss	L	3.64 x 21.21	200.90	+20	323.00	453.00	2"	50.0	22.0%	49.0%
720280	Q6941/A	B	AM	Ss	L	3.68 x 21.22	202.80	+20	329.00	448.00	2"	50.0	22.0%	47.0%
720280	Q6942/A	B	AM	Ss	L	3.72 x 21.32	205.70	+20	292.00	431.00	2"	50.0	22.0%	35.0%
720280	Q6943/A	B	AM	Ss	L	3.77 x 21.34	208.10	+20	298.00	435.00	2"	50.0	22.0%	47.0%
720280	Q6944/A	B	AM	Ss	L	3.73 x 21.32	206.10	+20	301.00	442.00	2"	50.0	22.0%	36.0%
720280	Q6945/A	B	AM	Ss	L	3.59 x 21.31	199.90	+20	305.00	453.00	2"	50.0	22.0%	48.0%
720280	Q6946/A	B	AM	Ss	L	3.74 x 21.40	207.50	+20	297.00	438.00	2"	50.0	22.0%	39.0%
720280	Q6947/A	B	AM	Ss	L	3.56 x 21.27	198.10	+20	311.00	457.00	2"	50.0	22.0%	40.0%
720280	Q6948/A	B	AM	Ss	L	3.72 x 21.36	206.20	+20	300.00	441.00	2"	50.0	22.0%	41.0%
720280	Q6949/A	B	AM	Ss	L	3.64 x 21.30	201.90	+20	305.00	448.00	2"	50.0	22.0%	42.0%
720280	Q6950/A	B	AM	Ss	L	3.70 x 21.30	204.60	+20	301.00	439.00	2"	50.0	22.0%	42.0%
720280	Q6951/A	B	AM	Ss	L	3.80 x 21.40	210.10	+20	300.00	433.00	2"	50.0	22.0%	44.0%

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Customer: ROSETTI MARINO SPA

Kg: 11

Heat No.: 720280

Mt: 6,63

P.O. No.: PO: 1724000838 123A90A REV.1

Cta's job: LC0000910

Date: 08/05/2024

Item: 60

Pz No.: 1

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar: **02-23-29899** | Page / Pagina: **8 / 29**

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta: Ls	Sc	Type / Tip	Ori	Specimen dimensions / Dimensiuni epruvetelor: Size / Dimensiune	Area / Sectiune	Test temp / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: --	U.T.S. Req. Min: 415.00 Max: --	Elongation / Alungire: Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720280	Q6952/A	B	AM	Ss	L	3.59 x 21.29	199.60	+20	304.00	451.00	2"	50.8	22.0%	46.0%
720280	Q6953/A	B	AM	Ss	L	3.44 x 21.31	193.10	+20	318.00	470.00	2"	50.8	22.0%	45.0%
720280	Q6954/A	B	AM	Ss	L	3.74 x 21.32	206.60	+20	324.00	449.00	2"	50.8	22.0%	40.0%
720280	Q6955/A	B	AM	Ss	L	3.81 x 21.37	210.20	+20	293.00	433.00	2"	50.8	22.0%	41.0%
720280	Q6956/A	B	AM	Ss	L	3.75 x 21.28	206.50	+20	297.00	436.00	2"	50.8	22.0%	41.0%
720280	Q6957/A	B	AM	Ss	L	3.81 x 21.33	209.70	+20	297.00	433.00	2"	50.8	22.0%	40.0%
720280	Q6958/A	B	AM	Ss	L	3.81 x 21.34	209.80	+20	310.00	450.00	2"	50.8	22.0%	37.0%
720280	Q6959/A	B	AM	Ss	L	3.76 x 21.46	209.10	+20	314.00	440.00	2"	50.8	22.0%	47.0%
720280	Q6960/A	B	AM	Ss	L	3.72 x 21.26	205.00	+20	316.00	433.00	2"	50.8	22.0%	45.0%
720280	Q6961/A	B	AM	Ss	L	3.70 x 21.30	204.60	+20	305.00	442.00	2"	50.8	22.0%	40.0%
720280	Q6962/A	B	AM	Ss	L	3.85 x 21.36	211.80	+20	295.00	433.00	2"	50.8	22.0%	49.0%
720280	Q6963/A	B	AM	Ss	L	3.82 x 21.30	209.80	+20	311.00	449.00	2"	50.8	22.0%	46.0%
720280	Q6964/A	B	AM	Ss	L	3.60 x 21.36	200.90	+20	299.00	445.00	2"	50.8	22.0%	48.0%
720280	Q6965/A	B	AM	Ss	L	3.81 x 21.28	209.10	+20	293.00	432.00	2"	50.8	22.0%	40.0%
720280	Q6966/A	B	AM	Ss	L	3.79 x 21.32	208.70	+20	328.00	456.00	2"	50.8	22.0%	38.0%
720280	Q6967/A	B	AM	Ss	L	3.79 x 21.30	208.50	+20	295.00	429.00	2"	50.8	22.0%	47.0%
720280	Q6968/A	B	AM	Ss	L	3.85 x 21.32	211.30	+20	314.00	449.00	2"	50.8	22.0%	47.0%
720280	Q6969/A	B	AM	Ss	L	3.72 x 21.32	205.70	+20	327.00	434.00	2"	50.8	22.0%	39.0%
720280	Q6970/A	B	AM	Ss	L	3.72 x 21.36	206.20	+20	323.00	447.00	2"	50.8	22.0%	49.0%
720280	Q6971/A	B	AM	Ss	L	3.65 x 21.33	202.70	+20	297.00	440.00	2"	50.8	22.0%	41.0%

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Customer : ROSETTI MARINO SPA

P.O. No.: PO: 1724000838 123A90A REV.1

Cta's job: LC0000910

Item: 60

Kg: 11

Heat No.: 720280

Mt: 6,63

Date: 08/05/2024

Pz No.: 1

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	9 / 29
Date / Data: December 04, 2023	

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: COMMERCIALE TUBI ACCIAIO SPA	Customer's Order Item / Comanda clientului - Item: SM30076/OS0000073	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: 2261185/010
Manufacture Process / Proces de fabricatie: NORMALIZED / NORMALIZATE	Product Type / Tip de produs: See note nr.1 / vezi nota nr.1		Surface / Suprafata: See note nr.2 / vezi nota nr.2
Standard or Specification / Norma sau specificatie: NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1, / NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,		Steel Grade / Grad de otel: See note nr.3 / vezi nota nr.3	Ends / Capete: SQUARE CUT / CAPETE NETEDE (TAIATE DREPT)
Dimensions / Dimensiuni: ø.840" O.D. x .147" W.T. / ø21.30mm O.D. x 3.73mm W.T.	Schedule / Program: 80 / .	Length / Lungime: 16.404 ft ÷ 21.982 ft / 5000 mm ÷ 6700 mm	Quantity / Cantitate: 1951Pcs/buc. 42321'02" ft 45642,2 lb / 12899.48 mt 20703 kg	Nominal Weight / Greutate nominala: 1.09 lb/ft / 1.62 Kg/m

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta Ls	Sc	Type / Tip	Ori	Specimen dimensions / Dimensiuni epruvetelor Size / Dimensiune mm	Area / Sectiune mm2	Test temp / Temp de incercare °C	Y.S. EUL 0.5% Min: 240.00 Max: – MPa	U.T.S. Req. Min: 415.00 Max: – MPa	Elongation / Alungire Lo cal.	Lo mm	Min. %	Obt. %
720280	Q6972/A	B	AM	Ss	L	3.55 x 21.32	198.20	+20	307.00	472.00	2"	50.0	22.0%	42.0%
720280	Q6973/A	B	AM	Ss	L	3.70 x 21.42	206.00	+20	310.00	425.00	2"	50.0	22.0%	50.0%
720280	Q6974/A	B	AM	Ss	L	3.85 x 21.30	211.10	+20	311.00	436.00	2"	50.0	22.0%	48.0%
720280	Q6975/A	B	AM	Ss	L	3.84 x 21.26	210.40	+20	290.00	444.00	2"	50.0	22.0%	43.0%
720280	Q6976/A	B	AM	Ss	L	3.65 x 21.26	201.90	+20	309.00	457.00	2"	50.0	22.0%	39.0%
720280	Q6977/A	B	AM	Ss	L	3.96 x 21.20	214.50	+20	315.00	426.00	2"	50.0	22.0%	40.0%
720280	Q6978/A	B	AM	Ss	L	3.63 x 21.29	201.40	+20	334.00	462.00	2"	50.0	22.0%	47.0%
720280	Q6979/A	B	AM	Ss	L	3.72 x 21.32	205.70	+20	320.00	449.00	2"	50.0	22.0%	45.0%
720280	Q6980/A	B	AM	Ss	L	3.84 x 21.30	210.60	+20	317.00	430.00	2"	50.0	22.0%	37.0%
720280	Q6981/A	B	AM	Ss	L	3.64 x 21.25	201.40	+20	333.00	447.00	2"	50.0	22.0%	40.0%
720280	Q6982/A	B	AM	Ss	L	3.76 x 21.33	207.50	+20	320.00	435.00	2"	50.0	22.0%	49.0%
720280	Q6983/A	B	AM	Ss	L	3.64 x 21.37	202.80	+20	340.00	449.00	2"	50.0	22.0%	47.0%
720280	Q6984/A	B	AM	Ss	L	3.70 x 21.32	204.80	+20	326.00	447.00	2"	50.0	22.0%	46.0%
720280	Q6985/A	B	AM	Ss	L	3.71 x 21.27	204.70	+20	304.00	454.00	2"	50.0	22.0%	47.0%
720280	Q6986/A	B	AM	Ss	L	3.92 x 21.35	214.70	+20	304.00	445.00	2"	50.0	22.0%	39.0%
720280	Q6987/A	B	AM	Ss	L	3.60 x 21.40	201.30	+20	315.00	460.00	2"	50.0	22.0%	40.0%
720280	Q6988/A	B	AM	Ss	L	3.56 x 21.27	198.10	+20	308.00	455.00	2"	50.0	22.0%	46.0%
720280	Q6989/A	B	AM	Ss	L	3.65 x 21.35	203.00	+20	312.00	441.00	2"	50.0	22.0%	31.0%
720280	Q6990/A	B	AM	Ss	L	3.60 x 21.36	200.90	+20	302.00	446.00	2"	50.0	22.0%	41.0%
720280	Q6991/A	B	AM	Ss	L	3.81 x 21.37	210.20	+20	308.00	447.00	2"	50.0	22.0%	40.0%

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

Acest certificat a fost editat de un sistem computerizat si este valabil cu semnatura electronica. Pe certificatul original brandul "Tenaris" este colorat in verde si stampilat. In cazul in care proprietarul certificatului original va emite o copie a acestuia, el va atesta conformitatea cu originalul, asumandu-si totala responsabilitate pentru utilizarea nepermisa sau ilegala. Orice modificare si/sau falsificare va fi pedepsita de lege.

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Customer : ROSETTI MARINO SPA
Kg 11
Heat No.: 720280
Mt 6,63
Cta's job: LC0000910
Pz No.: 1
P.O. No.: PO: 1724000838 123A90A REV.1
Item: 60
Date: 08/05/2024

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar: **02-23-29899** | Page / Pagina: **10 / 29**

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta: Ls	Sc	Type / Tip	Ori	Specimen dimensions / Dimensiuni epruvetelor: Size / Dimensiune	Area / Sectiune	Test temp / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: –	U.T.S. Req. Min: 415.00 Max: –	Elongation / Alungire: Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720280	Q6992/A	B	AM	Ss	L	3.65 x 21.40	203.50	+20	309.00	453.00	2"	50.0	22.0%	50.0%
720280	Q6993/A	B	AM	Ss	L	3.85 x 21.30	211.10	+20	303.00	448.00	2"	50.0	22.0%	41.0%
720280	Q6994/A	B	AM	Ss	L	3.50 x 21.28	195.50	+20	315.00	463.00	2"	50.0	22.0%	37.0%
720280	Q6995/A	B	AM	Ss	L	3.58 x 21.45	201.00	+20	345.00	458.00	2"	50.0	22.0%	50.0%
720280	Q6996/A	B	AM	Ss	L	3.60 x 21.32	200.40	+20	313.00	458.00	2"	50.0	22.0%	41.0%
720280	Q6997/A	B	AM	Ss	L	3.75 x 21.44	208.40	+20	305.00	447.00	2"	50.0	22.0%	41.0%
720280	Q6998/A	B	AM	Ss	L	3.55 x 21.25	197.40	+20	340.00	471.00	2"	50.0	22.0%	48.0%
720280	Q6999/A	B	AM	Ss	L	3.65 x 21.36	203.10	+20	301.00	442.00	2"	50.0	22.0%	40.0%
720280	Q7000/A	B	AM	Ss	L	3.92 x 21.25	213.40	+20	296.00	438.00	2"	50.0	22.0%	48.0%
720280	Q7001/A	B	AM	Ss	L	3.85 x 21.30	215.30	+20	302.00	442.00	2"	50.0	22.0%	41.0%
720280	Q7002/A	B	AM	Ss	L	3.80 x 21.28	208.70	+20	296.00	427.00	2"	50.0	22.0%	43.0%
720280	Q7003/A	B	AM	Ss	L	3.79 x 21.36	209.20	+20	292.00	432.00	2"	50.0	22.0%	47.0%
720280	Q7004/A	B	AM	Ss	L	3.60 x 21.27	199.80	+20	337.00	450.00	2"	50.0	22.0%	40.0%
720280	Q7005/A	B	AM	Ss	L	3.57 x 21.31	199.00	+20	310.00	459.00	2"	50.0	22.0%	39.0%
720280	Q7006/A	B	AM	Ss	L	3.70 x 21.42	206.00	+20	306.00	447.00	2"	50.0	22.0%	49.0%
720280	Q7007/A	B	AM	Ss	L	3.81 x 21.37	210.20	+20	293.00	433.00	2"	50.0	22.0%	42.0%
720280	Q7008/A	B	AM	Ss	L	3.62 x 21.25	200.50	+20	306.00	453.00	2"	50.0	22.0%	49.0%
720280	Q7009/A	B	AM	Ss	L	3.73 x 21.29	205.80	+20	304.00	447.00	2"	50.0	22.0%	39.0%
720280	Q7010/A	B	AM	Ss	L	3.58 x 21.36	200.00	+20	307.00	450.00	2"	50.0	22.0%	49.0%
720280	Q7011/A	B	AM	Ss	L	3.65 x 21.27	202.00	+20	301.00	444.00	2"	50.0	22.0%	40.0%

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Customer : ROSETTI MARINO SPA

P.O. No.: PO: 1724000838 123A90A REV.1

Heat No.: 720280

Cta's job: LC0000910

Item: 60

Kg 11

Mt 6,63

Date: 08/05/2024

Pz No.: 1

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar: **02-23-29899** | Page / Pagina: **11 / 29**

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarje N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta: Ls	Sc	Type / Tip	Ori	Specimen dimensions / Dimensiuni epruvetelor: Size / Dimensiune	Area / Sectiune	Test temp / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: –	U.T.S. Req. Min: 415.00 Max: –	Elongation / Alungire: Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720280	Q7012/A	B	AM	Ss	L	3.74 x 21.29	206.20	+20	298.00	439.00	2"	50.0	22.0%	43.0%
720280	Q7013/A	B	AM	Ss	L	3.75 x 21.38	207.70	+20	283.00	425.00	2"	50.0	22.0%	48.0%
720280	Q7014/A	B	AM	Ss	L	3.51 x 21.33	196.50	+20	340.00	473.00	2"	50.0	22.0%	39.0%
720280	Q7015/A	B	AM	Ss	L	3.76 x 21.37	208.00	+20	294.00	431.00	2"	50.0	22.0%	50.0%
720280	Q7016/A	B	AM	Ss	L	3.83 x 21.31	210.30	+20	294.00	434.00	2"	50.0	22.0%	40.0%
720280	Q7017/A	B	AM	Ss	L	3.70 x 21.31	204.70	+20	301.00	447.00	2"	50.0	22.0%	40.0%
720280	Q7018/A	B	AM	Ss	L	3.74 x 21.31	206.40	+20	292.00	432.00	2"	50.0	22.0%	40.0%
720280	Q7019/A	B	AM	Ss	L	3.83 x 21.30	210.20	+20	292.00	427.00	2"	50.0	22.0%	38.0%
720280	Q7020/A	B	AM	Ss	L	3.47 x 21.30	194.40	+20	316.00	467.00	2"	50.0	22.0%	47.0%
720280	Q7021/A	B	AM	Ss	L	3.42 x 21.33	192.40	+20	319.00	472.00	2"	50.0	22.0%	46.0%
720280	Q7022/A	B	AM	Ss	L	3.71 x 21.29	204.90	+20	297.00	456.00	2"	50.0	22.0%	47.0%
720280	Q7023/A	B	AM	Ss	L	3.57 x 21.31	199.00	+20	338.00	453.00	2"	50.0	22.0%	52.0%
720280	Q7024/A	B	AM	Ss	L	3.72 x 21.33	205.80	+20	294.00	435.00	2"	50.0	22.0%	48.0%
720280	Q7025/A	B	AM	Ss	L	3.54 x 21.21	196.50	+20	343.00	478.00	2"	50.0	22.0%	37.0%
720280	Q7026/A	B	AM	Ss	L	3.72 x 21.30	205.50	+20	298.00	440.00	2"	50.0	22.0%	46.0%
720280	Q7027/A	B	AM	Ss	L	3.67 x 21.36	204.00	+20	309.00	445.00	2"	50.0	22.0%	44.0%
720280	Q7028/A	B	AM	Ss	L	3.65 x 21.33	202.70	+20	303.00	448.00	2"	50.0	22.0%	47.0%
720280	Q7029/A	B	AM	Ss	L	3.47 x 21.35	194.90	+20	312.00	458.00	2"	50.0	22.0%	38.0%
720280	Q7030/A	B	AM	Ss	L	3.69 x 21.32	204.40	+20	334.00	453.00	2"	50.0	22.0%	40.0%
720280	Q7031/A	B	AM	Ss	L	3.72 x 21.30	205.50	+20	336.00	448.00	2"	50.0	22.0%	50.0%

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Customer : ROSETTI MARINO SPA
P.O. No.: PO: 1724000838 123A90A REV.1
Heat No.: 720280
Cta's job: LC0000910
Date: 08/05/2024
Kg 11
Mt 6,63
Pz No.: 1
Item: 60

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar: **02-23-29899** | Page / Pagina: **12 / 29**

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta				Specimen dimensions / Dimensiuni epruvetelor		Test temp / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: –	U.T.S. Req. Min: 415.00 Max: –	Elongation / Alungire			
		Ls	Sc	Type / Tip	Ori	Size / Dimensiune	Area / Sectiune				Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720280	Q7032/A	B	AM	Ss	L	3.60 x 21.28	200.00	+20	307.00	446.00	2"	50.0	22.0%	40.0%
720280	Q7033/A	B	AM	Ss	L	3.41 x 21.26	191.20	+20	321.00	475.00	2"	50.0	22.0%	45.0%
720280	Q7034/A	B	AM	Ss	L	3.73 x 21.34	206.40	+20	314.00	438.00	2"	50.0	22.0%	47.0%
720280	Q7035/A	B	AM	Ss	L	3.77 x 21.32	207.90	+20	305.00	447.00	2"	50.0	22.0%	40.0%
720280	Q7036/A	B	AM	Ss	L	3.66 x 21.30	202.80	+20	306.00	450.00	2"	50.0	22.0%	41.0%
720280	Q7037/A	B	AM	Ss	L	3.69 x 21.29	204.00	+20	325.00	453.00	2"	50.0	22.0%	47.0%
720280	Q7038/A	B	AM	Ss	L	3.50 x 21.30	195.70	+20	349.00	486.00	2"	50.0	22.0%	40.0%
720280	Q7039/A	B	AM	Ss	L	3.75 x 21.28	206.50	+20	295.00	453.00	2"	50.0	22.0%	43.0%
720280	Q7040/A	B	AM	Ss	L	3.65 x 21.40	203.50	+20	290.00	425.00	2"	50.0	22.0%	47.0%
720280	Q7041/A	B	AM	Ss	L	3.65 x 21.35	203.00	+20	299.00	444.00	2"	50.0	22.0%	43.0%
720280	Q7042/A	B	AM	Ss	L	3.45 x 21.29	193.40	+20	318.00	470.00	2"	50.0	22.0%	47.0%
720280	Q7043/A	B	AM	Ss	L	3.73 x 21.23	205.10	+20	300.00	442.00	2"	50.0	22.0%	40.0%
720280	Q7044/A	B	AM	Ss	L	3.65 x 21.33	202.70	+20	317.00	440.00	2"	50.0	22.0%	48.0%
720280	Q7045/A	B	AM	Ss	L	3.75 x 21.20	205.60	+20	332.00	450.00	2"	50.0	22.0%	38.0%
720280	Q7046/A	B	AM	Ss	L	3.68 x 21.32	203.90	+20	300.00	441.00	2"	50.0	22.0%	48.0%
720280	Q7047/A	B	AM	Ss	L	3.45 x 21.39	194.40	+20	316.00	467.00	2"	50.0	22.0%	44.0%
720280	Q7048/A	B	AM	Ss	L	3.84 x 21.28	210.40	+20	290.00	444.00	2"	50.0	22.0%	43.0%
720280	Q7049/A	B	AM	Ss	L	3.45 x 21.29	193.40	+20	318.00	470.00	2"	50.0	21.0%	47.0%
720280	Q7050/A	B	AM	Ss	L	3.71 x 21.28	204.80	+20	316.00	433.00	2"	50.0	22.0%	48.0%
720280	Q7051/A	B	AM	Ss	L	3.74 x 21.35	206.90	+20	305.00	446.00	2"	50.0	22.0%	47.0%

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Customer : ROSETTI MARINO SPA
P.O. No.: PO: 1724000838 123A90A REV.1
Heat No.: 720280
Cta's job: LC0000910
Item: 60
Kg 11
Mt 6,63
Date: 08/05/2024
Pz No.: 1

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	13 / 29
Date / Data: December 04, 2023	

Silcotub S.A. Plant
93, Mihai Viteazul Blvd,
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta				Specimen dimensions / Dimensiuni epruvetelor		Test temp / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: –	U.T.S. Req. Min: 415.00 Max: –	Elongation / Alungire			
		Ls	Sc	Type / Tip	Ori	Size / Dimensiune	Area / Sectiune	Temp de incercare			Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720280	Q7052/A	B	AM	Ss	L	3.56 x 21.46	200.20	+20	314.00	463.00	2"	50.0	22.0%	38.0%
720280	Q7053/A	B	AM	Ss	L	3.80 x 21.33	209.30	+20	290.00	429.00	2"	50.0	22.0%	39.0%
720280	Q7054/A	B	AM	Ss	L	4.01 x 21.33	218.20	+20	320.00	438.00	2"	50.0	22.0%	43.0%
720280	Q7055/A	B	AM	Ss	L	3.82 x 21.27	209.40	+20	311.00	449.00	2"	50.0	22.0%	40.0%
720280	Q7056/A	B	AM	Ss	L	3.66 x 21.30	202.80	+20	298.00	438.00	2"	50.0	22.0%	40.0%
720280	Q7057/A	B	AM	Ss	L	3.63 x 21.28	201.30	+20	337.00	459.00	2"	50.0	22.0%	40.0%
720280	Q7058/A	B	AM	Ss	L	3.74 x 21.30	206.30	+20	300.00	440.00	2"	50.0	22.0%	38.0%
720280	Q7059/A	B	AM	Ss	L	3.58 x 21.35	199.90	+20	342.00	453.00	2"	50.0	22.0%	36.0%
720280	Q7060/A	B	AM	Ss	L	3.72 x 21.37	206.30	+20	301.00	439.00	2"	50.0	22.0%	43.0%
720280	Q7061/A	B	AM	Ss	L	3.87 x 21.25	211.30	+20	312.00	439.00	2"	50.0	22.0%	41.0%
720280	Q7062/A	B	AM	Ss	L	3.59 x 21.40	200.90	+20	302.00	454.00	2"	50.0	22.0%	50.0%
720280	Q7063/A	B	AM	Ss	L	3.82 x 21.34	210.30	+20	312.00	441.00	2"	50.0	22.0%	50.0%
720280	Q7064/A	B	AM	Ss	L	3.92 x 21.28	213.80	+20	322.00	447.00	2"	50.0	22.0%	42.0%
720280	Q7065/A	B	AM	Ss	L	3.59 x 21.34	200.20	+20	310.00	453.00	2"	50.0	22.0%	42.0%
720280	Q7066/A	B	AM	Ss	L	3.53 x 21.29	197.00	+20	312.00	460.00	2"	50.0	22.0%	36.0%
720280	Q7067/A	B	AM	Ss	L	3.69 x 21.28	203.90	+20	308.00	444.00	2"	50.0	22.0%	40.0%
720280	Q7068/A	B	AM	Ss	L	3.50 x 21.20	194.60	+20	327.00	457.00	2"	50.0	22.0%	41.0%
720280	Q7069/A	B	AM	Ss	L	3.67 x 21.27	202.90	+20	325.00	455.00	2"	50.0	22.0%	39.0%
720280	Q7070/A	B	AM	Ss	L	3.72 x 21.29	205.30	+20	320.00	454.00	2"	50.0	22.0%	41.0%
720280	Q7071/A	B	AM	Ss	L	3.88 x 21.30	212.30	+20	313.00	444.00	2"	50.0	22.0%	40.0%

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Customer : ROSETTI MARINO SPA

P.O. No.: PO: 1724000838 123A90A REV.1

Heat No.: 720280

Cle's job: LC0000910

Item: 60

Kg 11

Mt 6,63

Date: 08/05/2024

Pz No.: 1

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar: **02-23-29899** | Page / Pagina: **14 / 29**

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta: Ls	Sc	Type / Tip	Ori	Specimen dimensions / Dimensiuni epruvetelor: Size / Dimensiune	Area / Sectiune	Test temp / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: –	U.T.S. Req. Min: 415.00 Max: –	Elongation / Alungire: Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720280	Q7072/A	B	AM	Ss	L	3.60 x 21.20	199.10	+20	333.00	452.00	2"	50.0	22.0%	41.0%
720280	Q7073/A	B	AM	Ss	L	3.72 x 21.36	206.20	+20	298.00	441.00	2"	50.0	22.0%	45.0%
720280	Q7074/A	B	AM	Ss	L	3.77 x 21.50	210.00	+20	295.00	437.00	2"	50.0	22.0%	38.0%
720280	Q7075/A	B	AM	Ss	L	3.65 x 21.36	203.10	+20	310.00	454.00	2"	50.0	22.0%	51.0%
720280	Q7076/A	B	AM	Ss	L	3.54 x 21.29	197.40	+20	321.00	463.00	2"	50.0	22.0%	44.0%
720280	Q7077/A	B	AM	Ss	L	3.51 x 21.22	195.30	+20	329.00	463.00	2"	50.0	22.0%	48.0%
720280	Q7078/A	B	AM	Ss	L	3.56 x 21.37	199.20	+20	316.00	449.00	2"	50.0	22.0%	47.0%
720280	Q7079/A	B	AM	Ss	L	3.95 x 21.20	214.10	+20	306.00	438.00	2"	50.0	22.0%	39.0%
720280	Q7080/A	B	AM	Ss	L	3.65 x 21.23	201.60	+20	313.00	442.00	2"	50.0	22.0%	45.0%
720280	Q7081/A	B	AM	Ss	L	3.81 x 21.41	210.70	+20	307.00	446.00	2"	50.0	22.0%	48.0%
720280	Q7082/A	B	AM	Ss	L	3.75 x 21.33	207.10	+20	293.00	440.00	2"	50.0	22.0%	47.0%
720280	Q7083/A	B	AM	Ss	L	3.58 x 21.38	200.20	+20	303.00	446.00	2"	50.0	22.0%	47.0%
720280	Q7084/A	B	AM	Ss	L	3.82 x 21.30	209.80	+20	290.00	446.00	2"	50.0	22.0%	45.0%
720280	Q7085/A	B	AM	Ss	L	3.62 x 21.33	201.40	+20	313.00	459.00	2"	50.0	22.0%	46.0%
720280	Q7086/A	B	AM	Ss	L	3.67 x 21.25	202.70	+20	313.00	457.00	2"	50.0	22.0%	40.0%
720280	Q7087/A	B	AM	Ss	L	3.72 x 21.27	205.10	+20	300.00	442.00	2"	50.0	22.0%	41.0%
720280	Q7088/A	B	AM	Ss	L	3.69 x 21.35	204.70	+20	298.00	437.00	2"	50.0	22.0%	46.0%
720280	Q7089/A	B	AM	Ss	L	3.65 x 21.34	202.80	+20	356.00	501.00	2"	50.0	22.0%	39.0%
720280	Q7090/A	B	AM	Ss	L	3.78 x 21.33	208.40	+20	293.00	432.00	2"	50.0	22.0%	47.0%
720280	Q7091/A	B	AM	Ss	L	3.67 x 21.38	204.20	+20	304.00	444.00	2"	50.0	22.0%	40.0%

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Customer: ROSETTI MARINO SPA
P.O. No.: PO: 1724000838 123A90A REV.1
Heat No.: 720280
Cta's job: LC0000910
Item: 60
Kg 11
Mt 6,63
Date: 08/05/2024
Pz No.: 1

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar: **02-23-29899** | Page / Pagina: **15 / 29**

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**	Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**
Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta: Ls	Sc	Type / Tip	Ori	Specimen dimensions / Dimensiuni epruvetelor: Size / Dimensiune	Area / Sectiune	Test temp / Temp de incercare	Y.S. EUL 0.5% Min: 240.00 Max: –	U.T.S. Req. Min: 415.00 Max: –	Elongation / Alungire: Lo		Min.	Obt.
						mm	mm2	°C	MPa	MPa	cal.	mm	%	%
720280	Q7092/A	B	AM	Ss	L	3.72 x 21.35	206.00	+20	312.00	456.00	2"	50.8	22.0%	39.0%
720280	Q7093/A	B	AM	Ss	L	3.60 x 21.30	200.20	+20	314.00	445.00	2"	50.8	22.0%	49.0%
720280	Q7094/A	B	AM	Ss	L	3.83 x 21.34	210.70	+20	305.00	443.00	2"	50.8	22.0%	52.0%
720280	Q7095/A	B	AM	Ss	L	3.78 x 21.27	207.70	+20	306.00	449.00	2"	50.8	22.0%	40.0%
720280	Q7096/A	B	AM	Ss	L	3.80 x 21.37	209.80	+20	312.00	438.00	2"	50.8	22.0%	46.0%
720280	Q7097/A	B	AM	Ss	L	3.68 x 21.23	202.90	+20	323.00	452.00	2"	50.8	22.0%	38.0%
720280	Q7098/A	B	AM	Ss	L	3.96 x 21.34	216.20	+20	297.00	429.00	2"	50.8	22.0%	53.0%
720280	Q7099/A	B	AM	Ss	L	3.95 x 21.36	216.00	+20	311.00	449.00	2"	50.8	22.0%	38.0%
720280	Q7100/A	B	AM	Ss	L	3.87 x 21.34	212.40	+20	300.00	423.00	2"	50.8	22.0%	46.0%
720280	Q7101/A	B	AM	Ss	L	3.72 x 21.34	205.90	+20	300.00	440.00	2"	50.8	22.0%	50.0%
720280	Q7102/A	B	AM	Ss	L	3.85 x 21.36	211.80	+20	294.00	434.00	2"	50.8	22.0%	41.0%
720280	Q7103/A	B	AM	Ss	L	3.61 x 21.33	201.00	+20	305.00	443.00	2"	50.8	22.0%	49.0%
720280	Q7104/A	B	AM	Ss	L	3.80 x 21.23	208.10	+20	294.00	437.00	2"	50.8	22.0%	41.0%
720280	Q7105/A	B	AM	Ss	L	3.70 x 21.34	205.00	+20	299.00	443.00	2"	50.8	22.0%	40.0%
720280	Q7106/A	B	AM	Ss	L	3.69 x 21.32	204.40	+20	308.00	451.00	2"	50.8	22.0%	41.0%
720280	Q7107/A	B	AM	Ss	L	3.62 x 21.34	201.50	+20	311.00	457.00	2"	50.8	22.0%	41.0%
720280	Q7108/A	B	AM	Ss	L	3.82 x 21.31	209.90	+20	313.00	445.00	2"	50.8	22.0%	40.0%
720280	Q7109/A	B	AM	Ss	L	3.65 x 21.35	203.00	+20	300.00	443.00	2"	50.8	22.0%	41.0%
720280	Q7110/A	B	AM	Ss	L	3.65 x 21.32	202.60	+20	300.00	442.00	2"	50.8	22.0%	48.0%
720280	Q7111/A	B	AM	Ss	L	3.30 x 21.50	188.70	+20	331.00	483.00	2"	50.8	22.0%	48.0%

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Customer : ROSETTI MARINO SPA

P.O. No.: PO: 1724000838 123A90A REV.1

Heat No.: 720280

Cta's job: LC0000910

Item: 60

Kg 11

Mt 6,63

Date: 08/05/2024

Pz No.: 1

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar: **02-23-29899** | Page / Pagina: **16 / 29**

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260.661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

Heat N° / Sarja N°	Sample N° / Proba N°	Specimen condition / Conditie epruveta: Ls	Sc	Type / Tip	Ori	Specimen dimensions / Dimensiuni epruvetelor: Size / Dimensiune (mm)	Area / Sectiune (mm2)	Test temp / Temp de incercare (°C)	Y.S. EUL 0.5% Min: 240.00 Max: – (MPa)	U.T.S. Req. Min: 415.00 Max: – (MPa)	Elongation / Alungire: Lo (cal.)	Lo (mm)	Min. (%)	Obt. (%)
720280	Q7112/A	B	AM	Ss	L	3.66 x 21.35	203.40	+20	301.00	443.00	2"	50.0	22.0%	46.0%
720280	Q7113/A	B	AM	Ss	L	3.66 x 21.38	203.70	+20	301.00	441.00	2"	50.0	22.0%	42.0%
720280	Q7114/A	B	AM	Ss	L	3.68 x 21.31	203.80	+20	326.00	445.00	2"	50.0	22.0%	40.0%
720280	Q7115/A	B	AM	Ss	L	3.69 x 21.29	204.00	+20	317.00	442.00	2"	50.0	22.0%	39.0%
720280	Q7116/A	B	AM	Ss	L	3.61 x 21.31	200.70	+20	326.00	443.00	2"	50.0	22.0%	47.0%
720280	Q7117/A	B	AM	Ss	L	3.42 x 21.25	191.60	+20	328.00	471.00	2"	50.0	21.0%	47.0%
720280	Q7118/A	B	AM	Ss	L	3.65 x 21.26	201.90	+20	314.00	448.00	2"	50.0	22.0%	48.0%
720280	Q7119/A	B	AM	Ss	L	3.61 x 21.25	200.10	+20	298.00	441.00	2"	50.0	22.0%	40.0%
720280	Q7120/A	B	AM	Ss	L	3.83 x 21.39	211.30	+20	288.00	424.00	2"	50.0	22.0%	49.0%
720280	Q7121/A	B	AM	Ss	L	3.55 x 21.36	198.60	+20	319.00	454.00	2"	50.0	22.0%	44.0%
720280	Q7122/A	B	AM	Ss	L	3.84 x 21.28	210.40	+20	290.00	444.00	2"	50.0	22.0%	43.0%
720280	Q7123/A	B	AM	Ss	L	3.74 x 21.30	206.30	+20	318.00	438.00	2"	50.0	22.0%	46.0%
720280	Q7124/A	B	AM	Ss	L	3.75 x 21.32	207.00	+20	345.00	452.00	2"	50.0	22.0%	37.0%
720280	Q7125/A	B	AM	Ss	L	3.63 x 21.30	201.50	+20	317.00	443.00	2"	50.0	22.0%	44.0%
720280	Q7126/A	B	AM	Ss	L	3.69 x 21.29	204.00	+20	319.00	450.00	2"	50.0	22.0%	43.0%
720280	Q7127/A	B	AM	Ss	L	3.82 x 21.36	210.50	+20	329.00	437.00	2"	50.0	22.0%	45.0%
720280	Q7128/A	B	AM	Ss	L	3.76 x 21.30	207.20	+20	323.00	429.00	2"	50.0	22.0%	44.0%
720280	Q7129/A	B	AM	Ss	L	3.72 x 21.20	204.30	+20	326.00	449.00	2"	50.0	22.0%	41.0%
720280	Q7130/A	B	AM	Ss	L	3.60 x 21.28	200.00	+20	315.00	442.00	2"	50.0	22.0%	39.0%

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Customer : ROSETTI MARINO SPA

P.O. No.: PO: 1724000838 123A90A REV.1

Heat No.: 720280

Cta's job: LC0000910

Kg 11 | Mt 6,63 | Pz No.: 1

Item: 60 | Date: 08/05/2024

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	17 / 29
Date / Data: December 04, 2023	

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**		Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**			Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**		Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

TENSILE TEST / TEST DE TRACTIUNE

AM: As manufactured / Ca fabricat	Ls: Location of sample / Locatia probei	Ori: Orientation / Orientare	U.T.S: Ultimate Tensile Strength / Rezistenta la
B: Body / Corp	Max: Maximum / Maxim	Req: Required / Cerinta	rupere
L: Longitudinal / Longitudinal	Min: Minimum / Minim	Sc: Specimen condition / Starea epruvetei	Y.S: Yield Strength / Rezistenta la curgere
Lo: initial length / Lungime initiala	Obt: Obtained / Obtinut	Ss: Strip specimen / Rectangular	

CHEMICAL COMPOSITION / COMPOZITIE CHIMICA

			Composition % / Compozitie %											
			X 100								X 1000			
			C	Mn	Si	Ni	Cr	Mo	Cu	F1	P	S	Nb	V
		H Max	30	135	–	40	30	12	40	100	25	25	20	80
		Min	–	29	10	–	–	–	–	–	–	–	–	–
Heat N° / Sarja N°	Sample N° / Proba N°	P Max	30	135	–	40	30	12	40	100	25	25	20	80
		Min	–	29	10	–	–	–	–	–	–	–	–	–
720279		H	9	106	19	11	6	3	20	40.3	9	4	1	3
720279	C5464/A	P	8	106	21	10	6	2	21	39.5	9	3	2	5
720279	C5486/A	P	7	108	20	10	6	2	20	38.5	8	2	2	5
720280		H	9	105	20	11	8	3	19	41.3	10	3	1	3
720280	C5383/A	P	7	105	20	10	8	3	18	39.5	8	3	2	5
720280	C5481/A	P	7	106	20	10	8	3	18	39.5	8	3	2	5

F1: (V +Ni+Cr+Mo+Cu)	Max: Maximum / Maxim	P: Product / Produs
H: Heat / Sarja	Min: Minimum / Minim	

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Customer : ROSETTI MARINO SPA

P.O. No.: PO: 1724000838 123A90A REV.1	Heat No.: 720280	Kg 11	Pz No.: 1
	Cte's job: LC0000910	Mt 6,63	
Item: 60	Date: 08/05/2024		

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	18 / 29

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
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România
Tel: + 40 260 620720
Fax: + 40 260 661561

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

BENDING / INDOIRE

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	C5384/A	E1	AM	1 pipe of the lot	Good / Conform
720280	C5385/A	E1	AM	1 pipe of the lot	Good / Conform
720280	C5386/A	E1	AM	1 pipe of the lot	Good / Conform
720279	C5465/A	E1	AM	1 pipe of the lot	Good / Conform
720279	C5466/A	E1	AM	1 pipe of the lot	Good / Conform
720280	C5467/A	E1	AM	1 pipe of the lot	Good / Conform
720279	C5470/A	E1	AM	1 pipe of the lot	Good / Conform
720279	C5471/A	E1	AM	1 pipe of the lot	Good / Conform
720280	C5481/A	E1	AM	1 pipe of the lot	Good / Conform

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	C5487/A	E1	AM	1 pipe of the lot	Good / Conform
720280	C5493/A	E1	AM	1 pipe of the lot	Good / Conform
720280	C5498/A	E1	AM	1 pipe of the lot	Good / Conform
720280	C5499/A	E1	AM	1 pipe of the lot	Good / Conform
720280	C5505/A	E1	AM	1 pipe of the lot	Good / Conform
720280	C5506/A	E1	AM	1 pipe of the lot	Good / Conform
720280	C5510/A	E1	AM	1 pipe of the lot	Good / Conform
720280	C9099/A	E1	AM	1 pipe of the lot	Good / Conform

AM: As manufactured / Ca fabricat E1 / E2: Ends of Sampling / Capatul testat Sc: Specimen condition / Starea epruvetei

FLATTENING TEST / APLATISARE

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720279	C5829/A	E1	AM	5% of the lot	Good / Conform
720279	C5830/A	E1	AM	5% of the lot	Good / Conform
720279	C5831/A	E1	AM	5% of the lot	Good / Conform

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720279	C5832/A	E1	AM	5% of the lot	Good / Conform
720279	C5833/A	E1	AM	5% of the lot	Good / Conform
720279	C5834/A	E1	AM	5% of the lot	Good / Conform

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Customer : ROSETTI MARINO SPA	Kg 11	Pz No.: 1	
P.O. No.: PO: 1724000838 123A90A REV.1	Heat No.: 720280	Mt 6,63	
	Cta's job: LC0000910	Date: 08/05/2024	
	Item: 60		

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	19 / 29

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
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România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

FLATTENING TEST / APLATISARE

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720279	C5835/A	E1	AM	5% of the lot	Good / Conform
720279	C5836/A	E1	AM	5% of the lot	Good / Conform
720279	C5837/A	E1	AM	5% of the lot	Good / Conform
720279	C5838/A	E1	AM	5% of the lot	Good / Conform
720279	C5839/A	E1	AM	5% of the lot	Good / Conform
720279	C5840/A	E1	AM	5% of the lot	Good / Conform
720279	C5841/A	E1	AM	5% of the lot	Good / Conform
720279	C5842/A	E1	AM	5% of the lot	Good / Conform
720279	C5843/A	E1	AM	5% of the lot	Good / Conform
720279	C5844/A	E1	AM	5% of the lot	Good / Conform
720279	C5845/A	E1	AM	5% of the lot	Good / Conform
720279	C5846/A	E1	AM	5% of the lot	Good / Conform
720279	C5847/A	E1	AM	5% of the lot	Good / Conform
720279	C5848/A	E1	AM	5% of the lot	Good / Conform
720279	C5849/A	E1	AM	5% of the lot	Good / Conform
720279	C5850/A	E1	AM	5% of the lot	Good / Conform
720279	C5851/A	E1	AM	5% of the lot	Good / Conform
720279	C5852/A	E1	AM	5% of the lot	Good / Conform
720279	C5853/A	E1	AM	5% of the lot	Good / Conform
720279	C5854/A	E1	AM	5% of the lot	Good / Conform
720279	C5855/A	E1	AM	5% of the lot	Good / Conform

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720279	C5856/A	E1	AM	5% of the lot	Good / Conform
720279	C5857/A	E1	AM	5% of the lot	Good / Conform
720279	C5858/A	E1	AM	5% of the lot	Good / Conform
720279	C5859/A	E1	AM	5% of the lot	Good / Conform
720279	C5860/A	E1	AM	5% of the lot	Good / Conform
720279	C5861/A	E1	AM	5% of the lot	Good / Conform
720279	C5862/A	E1	AM	5% of the lot	Good / Conform
720279	C5863/A	E1	AM	5% of the lot	Good / Conform
720279	C5865/A	E1	AM	5% of the lot	Good / Conform
720279	C5866/A	E1	AM	5% of the lot	Good / Conform
720279	C5867/A	E1	AM	5% of the lot	Good / Conform
720279	C5868/A	E1	AM	5% of the lot	Good / Conform
720279	C5869/A	E1	AM	5% of the lot	Good / Conform
720279	C5870/A	E1	AM	5% of the lot	Good / Conform
720279	C5871/A	E1	AM	5% of the lot	Good / Conform
720279	C5872/A	E1	AM	5% of the lot	Good / Conform
720279	C5873/A	E1	AM	5% of the lot	Good / Conform
720279	C5874/A	E1	AM	5% of the lot	Good / Conform
720279	C5875/A	E1	AM	5% of the lot	Good / Conform
720279	C5876/A	E1	AM	5% of the lot	Good / Conform
720279	C5877/A	E1	AM	5% of the lot	Good / Conform

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Customer : ROSETTI MARINO SPA

P.O. No.: PO: 1724000838 123A90A REV.1	Heat No.: 720280	Cta's job: LC0000910	Kg 11	Mt 6,63	Pz No.: 1
			Date: 08/05/2024	Item: 60	

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	20 / 29

Date / Data: December 04, 2023

Silcotub S.A. Plant
93, Mihai Viteazul Blvd,
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: COMMERCIALE TUBI ACCIAIO SPA	Customer's Order Item / Comanda clientului - Item: SM30076/OS0000073	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: 2261185/010
Manufacture Process / Proces de fabricatie: NORMALIZED NORMALIZATE	Product Type / Tip de produs: See note nr.1 vezi nota nr.1		Surface / Suprafata: See note nr.2 vezi nota nr.2
Standard or Specification / Norma sau specificatie: NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1, NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,		Steel Grade / Grad de otel: See note nr.3 vezi nota nr.3	Ends / Capete: SQUARE CUT CAPETE NETEDE (TAIATE DREPT)

Dimensions / Dimensiuni:	Schedule / Program:	Length / Lungime:	Quantity / Cantitate: 1951Pcs/buc.		Nominal Weight / Greutate nominala:
ø.840" O.D. x .147" W.T.	80	16.404 ft ÷ 21.982 ft	42321'02" ft	45642,2 lb	1.09 lb/ft
ø21.30mm O.D. x 3.73mm W.T.	.	5000 mm ÷ 6700 mm	12899.48 mt	20703 kg	1.62 Kg/m

FLATTENING TEST / APLATISARE

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720279	C5878/A	E1	AM	5% of the lot	Good / Conform
720279	C5879/A	E1	AM	5% of the lot	Good / Conform
720279	C5880/A	E1	AM	5% of the lot	Good / Conform
720279	C5881/A	E1	AM	5% of the lot	Good / Conform
720279	C5882/A	E1	AM	5% of the lot	Good / Conform
720279	C5883/A	E1	AM	5% of the lot	Good / Conform
720279	C5884/A	E1	AM	5% of the lot	Good / Conform
720279	C5885/A	E1	AM	5% of the lot	Good / Conform
720279	C5886/A	E1	AM	5% of the lot	Good / Conform
720279	C5887/A	E1	AM	5% of the lot	Good / Conform
720279	C5888/A	E1	AM	5% of the lot	Good / Conform
720279	C5889/A	E1	AM	5% of the lot	Good / Conform
720279	C5890/A	E1	AM	5% of the lot	Good / Conform
720279	C5891/A	E1	AM	5% of the lot	Good / Conform
720279	C5892/A	E1	AM	5% of the lot	Good / Conform
720279	C5893/A	E1	AM	5% of the lot	Good / Conform
720280	C6026/A	E1	AM	5% of the lot	Good / Conform
720280	C6027/A	E1	AM	5% of the lot	Good / Conform
720280	C6028/A	E1	AM	5% of the lot	Good / Conform
720280	C6029/A	E1	AM	5% of the lot	Good / Conform
720280	C6030/A	E1	AM	5% of the lot	Good / Conform

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	C6031/A	E1	AM	5% of the lot	Good / Conform
720280	C6032/A	E1	AM	5% of the lot	Good / Conform
720280	C6033/A	E1	AM	5% of the lot	Good / Conform
720280	C6034/A	E1	AM	5% of the lot	Good / Conform
720280	C6035/A	E1	AM	5% of the lot	Good / Conform
720280	C6036/A	E1	AM	5% of the lot	Good / Conform
720280	C6037/A	E1	AM	5% of the lot	Good / Conform
720280	C6038/A	E1	AM	5% of the lot	Good / Conform
720280	C6039/A	E1	AM	5% of the lot	Good / Conform
720280	C6040/A	E1	AM	5% of the lot	Good / Conform
720280	C6041/A	E1	AM	5% of the lot	Good / Conform
720280	C6042/A	E1	AM	5% of the lot	Good / Conform
720280	C6043/A	E1	AM	5% of the lot	Good / Conform
720280	C6044/A	E1	AM	5% of the lot	Good / Conform
720280	C6045/A	E1	AM	5% of the lot	Good / Conform
720280	C6046/A	E1	AM	5% of the lot	Good / Conform
720280	C6047/A	E1	AM	5% of the lot	Good / Conform
720280	C6048/A	E1	AM	5% of the lot	Good / Conform
720280	C6049/A	E1	AM	5% of the lot	Good / Conform
720280	C6050/A	E1	AM	5% of the lot	Good / Conform
720280	C6051/A	E1	AM	5% of the lot	Good / Conform

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Customer : ROSETTI MARINO SPA

P.O. No.: PO: 1724000838 123A90A REV.1

Kg	11
Heat No.:	720280
Mt	6,63
Cta's job:	LC0000910
Date:	08/05/2024
Pz No.:	1
Item:	60

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar: **02-23-29899**

Page / Pagina: **21 / 29**

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd,
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item./ Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greulate nominala: **1.09 lb/ft** **1.62 Kg/m**

FLATTENING TEST / APLATISARE

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	C6052/A	E1	AM	5% of the lot	Good / Conform
720280	C6053/A	E1	AM	5% of the lot	Good / Conform
720280	C6054/A	E1	AM	5% of the lot	Good / Conform
720280	C6055/A	E1	AM	5% of the lot	Good / Conform
720280	C6056/A	E1	AM	5% of the lot	Good / Conform
720280	C6057/A	E1	AM	5% of the lot	Good / Conform
720280	C6058/A	E1	AM	5% of the lot	Good / Conform
720280	C6059/A	E1	AM	5% of the lot	Good / Conform
720280	C6060/A	E1	AM	5% of the lot	Good / Conform
720280	C6061/A	E1	AM	5% of the lot	Good / Conform
720280	C6062/A	E1	AM	5% of the lot	Good / Conform
720280	C6063/A	E1	AM	5% of the lot	Good / Conform
720280	C6064/A	E1	AM	5% of the lot	Good / Conform
720280	C6065/A	E1	AM	5% of the lot	Good / Conform
720280	C6066/A	E1	AM	5% of the lot	Good / Conform
720280	C6067/A	E1	AM	5% of the lot	Good / Conform
720280	C6068/A	E1	AM	5% of the lot	Good / Conform
720280	C6069/A	E1	AM	5% of the lot	Good / Conform
720280	C6070/A	E1	AM	5% of the lot	Good / Conform
720280	C6071/A	E1	AM	5% of the lot	Good / Conform
720280	C6072/A	E1	AM	5% of the lot	Good / Conform

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	C6073/A	E1	AM	5% of the lot	Good / Conform
720280	C6074/A	E1	AM	5% of the lot	Good / Conform
720280	C6075/A	E1	AM	5% of the lot	Good / Conform
720280	C6076/A	E1	AM	5% of the lot	Good / Conform
720280	C6077/A	E1	AM	5% of the lot	Good / Conform
720280	C6078/A	E1	AM	5% of the lot	Good / Conform
720280	C6079/A	E1	AM	5% of the lot	Good / Conform
720280	C6080/A	E1	AM	5% of the lot	Good / Conform
720280	C6081/A	E1	AM	5% of the lot	Good / Conform
720280	C6082/A	E1	AM	5% of the lot	Good / Conform
720280	C6083/A	E1	AM	5% of the lot	Good / Conform
720280	C6084/A	E1	AM	5% of the lot	Good / Conform
720280	C6085/A	E1	AM	5% of the lot	Good / Conform
720280	C6086/A	E1	AM	5% of the lot	Good / Conform
720280	C6087/A	E1	AM	5% of the lot	Good / Conform
720280	C6088/A	E1	AM	5% of the lot	Good / Conform
720280	C6089/A	E1	AM	5% of the lot	Good / Conform
720280	C6090/A	E1	AM	5% of the lot	Good / Conform
720280	C6091/A	E1	AM	5% of the lot	Good / Conform
720280	C6092/A	E1	AM	5% of the lot	Good / Conform
720280	C6093/A	E1	AM	5% of the lot	Good / Conform

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Customer: ROSETTI MARINO SPA

P.O. No.: PO: 1724000838 123A90A REV.1

Cta's job: LC0000910

Item: 60

Kg	Mt	Pz No.:
11	6,63	1
Heat No.: 720280		Date: 08/05/2024

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	22 / 29

Date / Data: December 04, 2023

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661561

Customer / Client: COMMERCIALE TUBI ACCIAIO SPA	Customer's Order Item / Comanda clientului - Item: SM30076/OS0000073	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: 2261185/010
Manufacture Process / Proces de fabricatie: NORMALIZED NORMALIZATE	Product Type / Tip de produs: See note nr.1 vezi nota nr.1		Surface / Suprafata: See note nr.2 vezi nota nr.2
Standard or Specification / Norma sau specificatie: NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1, NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,		Steel Grade / Grad de otel: See note nr.3 vezi nota nr.3	Ends / Capete: SQUARE CUT CAPETE NETEDE (TAIATE DREPT)
Dimensions / Dimensiuni: ø.840" O.D. x .147" W.T. ø21.30mm O.D. x 3.73mm W.T.	Schedule / Program: 80 .	Length / Lungime: 16.404 ft ÷ 21.982 ft 5000 mm ÷ 6700 mm	Quantity / Cantitate: 1951Pcs/buc. 42321'02" ft 45642,2 lb 12899.48 mt 20703 kg	Nominal Weight / Greutate nominala: 1.09 lb/ft 1.62 Kg/m

FLATTENING TEST / APLATISARE

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	C6094/A	E1	AM	5% of the lot	Good / Conform
720280	C6095/A	E1	AM	5% of the lot	Good / Conform
720280	C6096/A	E1	AM	5% of the lot	Good / Conform
720280	C6097/A	E1	AM	5% of the lot	Good / Conform
720280	C6098/A	E1	AM	5% of the lot	Good / Conform
720280	C6099/A	E1	AM	5% of the lot	Good / Conform
720280	C6100/A	E1	AM	5% of the lot	Good / Conform
720280	C6101/A	E1	AM	5% of the lot	Good / Conform
720280	C6102/A	E1	AM	5% of the lot	Good / Conform
720280	C6103/A	E1	AM	5% of the lot	Good / Conform
720280	C6104/A	E1	AM	5% of the lot	Good / Conform
720280	C6105/A	E1	AM	5% of the lot	Good / Conform
720280	C6106/A	E1	AM	5% of the lot	Good / Conform
720280	C6107/A	E1	AM	5% of the lot	Good / Conform
720280	C6108/A	E1	AM	5% of the lot	Good / Conform
720280	C6109/A	E1	AM	5% of the lot	Good / Conform
720280	C6110/A	E1	AM	5% of the lot	Good / Conform
720280	C6111/A	E1	AM	5% of the lot	Good / Conform
720280	C6112/A	E1	AM	5% of the lot	Good / Conform
720280	C6113/A	E1	AM	5% of the lot	Good / Conform
720280	C6114/A	E1	AM	5% of the lot	Good / Conform

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	C6115/A	E1	AM	5% of the lot	Good / Conform
720280	C6116/A	E1	AM	5% of the lot	Good / Conform
720280	C6117/A	E1	AM	5% of the lot	Good / Conform
720280	Q6882/A	E1	AM	5% of the lot	Good / Conform
720280	Q6883/A	E1	AM	5% of the lot	Good / Conform
720280	Q6884/A	E1	AM	5% of the lot	Good / Conform
720280	Q6885/A	E1	AM	5% of the lot	Good / Conform
720280	Q6886/A	E1	AM	5% of the lot	Good / Conform
720280	Q6887/A	E1	AM	5% of the lot	Good / Conform
720280	Q6888/A	E1	AM	5% of the lot	Good / Conform
720280	Q6889/A	E1	AM	5% of the lot	Good / Conform
720280	Q6890/A	E1	AM	5% of the lot	Good / Conform
720280	Q6891/A	E1	AM	5% of the lot	Good / Conform
720280	Q6892/A	E1	AM	5% of the lot	Good / Conform
720280	Q6893/A	E1	AM	5% of the lot	Good / Conform
720280	Q6894/A	E1	AM	5% of the lot	Good / Conform
720280	Q6895/A	E1	AM	5% of the lot	Good / Conform
720280	Q6896/A	E1	AM	5% of the lot	Good / Conform
720280	Q6897/A	E1	AM	5% of the lot	Good / Conform
720280	Q6898/A	E1	AM	5% of the lot	Good / Conform
720280	Q6899/A	E1	AM	5% of the lot	Good / Conform

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Customer : ROSETTI MARINO SPA	Kg 11		
P.O. No.: PO: 1724000838 123A90A REV.1	Heat No.: 720280	Mt 6,63	
	Cta's job: LC0000910	Pz No.: 1	
	Item: 60	Date: 08/05/2024	

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	23 / 29

Date / Data: December 04, 2023

Silcotub S.A. Plant
93, Mihai Viteazul Blvd,
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: COMMERCIALE TUBI ACCIAIO SPA	Customer's Order Item / Comanda clientului - Item: SM30076/OS0000073	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: 2261185/010

Manufacture Process / Proces de fabricatie:	Product Type / Tip de produs:	Surface / Suprafata:
NORMALIZED NORMALIZATE	See note nr.1 vezi nota nr.1	See note nr.2 vezi nota nr.2

Standard or Specification / Norma sau specificatie:	Steel Grade / Grad de otel:	Ends / Capete:
NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1, NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,	See note nr.3 vezi nota nr.3	SQUARE CUT CAPETE NETEDE (TAIATE DREPT)

Dimensions / Dimensiuni:	Schedule / Program:	Length / Lungime:	Quantity / Cantitate: 1951Pcs/buc.		Nominal Weight / Greutate nominala:
ø.840" O.D. x .147" W.T.	80	16.404 ft ÷ 21.982 ft	42321'02" ft	45642,2 lb	1.09 lb/ft
ø21.30mm O.D. x 3.73mm W.T.	.	5000 mm ÷ 6700 mm	12899.48 mt	20703 kg	1.62 Kg/m

FLATTENING TEST / APLATISARE

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	Q6900/A	E1	AM	5% of the lot	Good / Conform
720280	Q6901/A	E1	AM	5% of the lot	Good / Conform
720280	Q6902/A	E1	AM	5% of the lot	Good / Conform
720280	Q6903/A	E1	AM	5% of the lot	Good / Conform
720280	Q6904/A	E1	AM	5% of the lot	Good / Conform
720280	Q6905/A	E1	AM	5% of the lot	Good / Conform
720280	Q6906/A	E1	AM	5% of the lot	Good / Conform
720280	Q6907/A	E1	AM	5% of the lot	Good / Conform
720280	Q6908/A	E1	AM	5% of the lot	Good / Conform
720280	Q6909/A	E1	AM	5% of the lot	Good / Conform
720280	Q6910/A	E1	AM	5% of the lot	Good / Conform
720280	Q6911/A	E1	AM	5% of the lot	Good / Conform
720280	Q6912/A	E1	AM	5% of the lot	Good / Conform
720280	Q6913/A	E1	AM	5% of the lot	Good / Conform
720280	Q6914/A	E1	AM	5% of the lot	Good / Conform
720280	Q6915/A	E1	AM	5% of the lot	Good / Conform
720280	Q6916/A	E1	AM	5% of the lot	Good / Conform
720280	Q6917/A	E1	AM	5% of the lot	Good / Conform
720280	Q6918/A	E1	AM	5% of the lot	Good / Conform
720280	Q6919/A	E1	AM	5% of the lot	Good / Conform
720280	Q6920/A	E1	AM	5% of the lot	Good / Conform

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	Q6921/A	E1	AM	5% of the lot	Good / Conform
720280	Q6922/A	E1	AM	5% of the lot	Good / Conform
720280	Q6924/A	E1	AM	5% of the lot	Good / Conform
720280	Q6925/A	E1	AM	5% of the lot	Good / Conform
720280	Q6926/A	E1	AM	5% of the lot	Good / Conform
720280	Q6927/A	E1	AM	5% of the lot	Good / Conform
720280	Q6928/A	E1	AM	5% of the lot	Good / Conform
720280	Q6929/A	E1	AM	5% of the lot	Good / Conform
720280	Q6930/A	E1	AM	5% of the lot	Good / Conform
720280	Q6931/A	E1	AM	5% of the lot	Good / Conform
720280	Q6932/A	E1	AM	5% of the lot	Good / Conform
720280	Q6933/A	E1	AM	5% of the lot	Good / Conform
720280	Q6934/A	E1	AM	5% of the lot	Good / Conform
720280	Q6935/A	E1	AM	5% of the lot	Good / Conform
720280	Q6936/A	E1	AM	5% of the lot	Good / Conform
720280	Q6937/A	E1	AM	5% of the lot	Good / Conform
720280	Q6938/A	E1	AM	5% of the lot	Good / Conform
720280	Q6939/A	E1	AM	5% of the lot	Good / Conform
720280	Q6940/A	E1	AM	5% of the lot	Good / Conform
720280	Q6941/A	E1	AM	5% of the lot	Good / Conform
720280	Q6942/A	E1	AM	5% of the lot	Good / Conform

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Customer : ROSETTI MARINO SPA

P.O. No.: PO: 1724000838 123A90A REV.1

Kg	11
Heat No.:	720280
Mt	6,63
Cta's job:	LC0000910
Date:	08/05/2024
Pz No.:	1
Item:	60

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	24 / 29

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd,
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**

Dimensions / Dimensiuni:	Schedule / Program:	Length / Lungime:	Quantity / Cantitate: **1951Pcs/buc.**		Nominal Weight / Greutate nominala:
ø.840" O.D. x .147" W.T.	**80**	**16.404 ft ÷ 21.982 ft**	**42321'02" ft**	**45642,2 lb**	**1.09 lb/ft**
ø21.30mm O.D. x 3.73mm W.T.	.	**5000 mm ÷ 6700 mm**	**12899.48 mt**	**20703 kg**	**1.62 Kg/m**

FLATTENING TEST / APLATISARE

Stancard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	Q6943/A	E1	AM	5% of the lot	Good / Conform
720280	Q6944/A	E1	AM	5% of the lot	Good / Conform
720280	Q6945/A	E1	AM	5% of the lot	Good / Conform
720280	Q6946/A	E1	AM	5% of the lot	Good / Conform
720280	Q6947/A	E1	AM	5% of the lot	Good / Conform
720280	Q6948/A	E1	AM	5% of the lot	Good / Conform
720280	Q6949/A	E1	AM	5% of the lot	Good / Conform
720280	Q6950/A	E1	AM	5% of the lot	Good / Conform
720280	Q6951/A	E1	AM	5% of the lot	Good / Conform
720280	Q6952/A	E1	AM	5% of the lot	Good / Conform
720280	Q6953/A	E1	AM	5% of the lot	Good / Conform
720280	Q6954/A	E1	AM	5% of the lot	Good / Conform
720280	Q6955/A	E1	AM	5% of the lot	Good / Conform
720280	Q6956/A	E1	AM	5% of the lot	Good / Conform
720280	Q6957/A	E1	AM	5% of the lot	Good / Conform
720280	Q6958/A	E1	AM	5% of the lot	Good / Conform
720280	Q6959/A	E1	AM	5% of the lot	Good / Conform
720280	Q6960/A	E1	AM	5% of the lot	Good / Conform
720280	Q6961/A	E1	AM	5% of the lot	Good / Conform
720280	Q6962/A	E1	AM	5% of the lot	Good / Conform
720280	Q6963/A	E1	AM	5% of the lot	Good / Conform

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	Q6964/A	E1	AM	5% of the lot	Good / Conform
720280	Q6965/A	E1	AM	5% of the lot	Good / Conform
720280	Q6966/A	E1	AM	5% of the lot	Good / Conform
720280	Q6967/A	E1	AM	5% of the lot	Good / Conform
720280	Q6968/A	E1	AM	5% of the lot	Good / Conform
720280	Q6969/A	E1	AM	5% of the lot	Good / Conform
720280	Q6970/A	E1	AM	5% of the lot	Good / Conform
720280	Q6971/A	E1	AM	5% of the lot	Good / Conform
720280	Q6972/A	E1	AM	5% of the lot	Good / Conform
720280	Q6973/A	E1	AM	5% of the lot	Good / Conform
720280	Q6974/A	E1	AM	5% of the lot	Good / Conform
720280	Q6975/A	E1	AM	5% of the lot	Good / Conform
720280	Q6976/A	E1	AM	5% of the lot	Good / Conform
720280	Q6977/A	E1	AM	5% of the lot	Good / Conform
720280	Q6978/A	E1	AM	5% of the lot	Good / Conform
720280	Q6979/A	E1	AM	5% of the lot	Good / Conform
720280	Q6980/A	E1	AM	5% of the lot	Good / Conform
720280	Q6981/A	E1	AM	5% of the lot	Good / Conform
720280	Q6982/A	E1	AM	5% of the lot	Good / Conform
720280	Q6983/A	E1	AM	5% of the lot	Good / Conform
720280	Q6984/A	E1	AM	5% of the lot	Good / Conform

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Customer : ROSETTI MARINO SPA		Kg 11	
P.O. No.: PO: 1724000838 123A90A REV.1	Heat No.: 720280	Mt 6,63	Pz No.: 1
	Cia's job: LC0000910	Date: 08/05/2024	
	Item: 60		

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	25 / 29

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**

Dimensions / Dimensiuni:	Schedule / Program:	Length / Lungime:	Quantity / Cantitate: **1951Pcs/buc.**		Nominal Weight / Greutate nominala:
ø.840" O.D. x .147" W.T.	**80**	**16.404 ft ÷ 21.982 ft**	**42321'02" ft**	**45642,2 lb**	**1.09 lb/ft**
ø21.30mm O.D. x 3.73mm W.T.	.	**5000 mm ÷ 6700 mm**	**12899.48 mt**	**20703 kg**	**1.62 Kg/m**

FLATTENING TEST / APLATISARE

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	Q6985/A	E1	AM	5% of the lot	Good / Conform
720280	Q6986/A	E1	AM	5% of the lot	Good / Conform
720280	Q6987/A	E1	AM	5% of the lot	Good / Conform
720280	Q6988/A	E1	AM	5% of the lot	Good / Conform
720280	Q6989/A	E1	AM	5% of the lot	Good / Conform
720280	Q6990/A	E1	AM	5% of the lot	Good / Conform
720280	Q6991/A	E1	AM	5% of the lot	Good / Conform
720280	Q6992/A	E1	AM	5% of the lot	Good / Conform
720280	Q6993/A	E1	AM	5% of the lot	Good / Conform
720280	Q6994/A	E1	AM	5% of the lot	Good / Conform
720280	Q6995/A	E1	AM	5% of the lot	Good / Conform
720280	Q6996/A	E1	AM	5% of the lot	Good / Conform
720280	Q6997/A	E1	AM	5% of the lot	Good / Conform
720280	Q6998/A	E1	AM	5% of the lot	Good / Conform
720280	Q6999/A	E1	AM	5% of the lot	Good / Conform
720280	Q7000/A	E1	AM	5% of the lot	Good / Conform
720280	Q7001/A	E1	AM	5% of the lot	Good / Conform
720280	Q7002/A	E1	AM	5% of the lot	Good / Conform
720280	Q7003/A	E1	AM	5% of the lot	Good / Conform
720280	Q7004/A	E1	AM	5% of the lot	Good / Conform
720280	Q7005/A	E1	AM	5% of the lot	Good / Conform

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	Q7006/A	E1	AM	5% of the lot	Good / Conform
720280	Q7007/A	E1	AM	5% of the lot	Good / Conform
720280	Q7008/A	E1	AM	5% of the lot	Good / Conform
720280	Q7009/A	E1	AM	5% of the lot	Good / Conform
720280	Q7010/A	E1	AM	5% of the lot	Good / Conform
720280	Q7011/A	E1	AM	5% of the lot	Good / Conform
720280	Q7012/A	E1	AM	5% of the lot	Good / Conform
720280	Q7013/A	E1	AM	5% of the lot	Good / Conform
720280	Q7014/A	E1	AM	5% of the lot	Good / Conform
720280	Q7015/A	E1	AM	5% of the lot	Good / Conform
720280	Q7016/A	E1	AM	5% of the lot	Good / Conform
720280	Q7017/A	E1	AM	5% of the lot	Good / Conform
720280	Q7018/A	E1	AM	5% of the lot	Good / Conform
720280	Q7019/A	E1	AM	5% of the lot	Good / Conform
720280	Q7020/A	E1	AM	5% of the lot	Good / Conform
720280	Q7021/A	E1	AM	5% of the lot	Good / Conform
720280	Q7022/A	E1	AM	5% of the lot	Good / Conform
720280	Q7023/A	E1	AM	5% of the lot	Good / Conform
720280	Q7024/A	E1	AM	5% of the lot	Good / Conform
720280	Q7025/A	E1	AM	5% of the lot	Good / Conform
720280	Q7118/A	E1	AM	5% of the lot	Good / Conform

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Customer : ROSETTI MARINO SPA
P.O. No.: PO: 1724000838 123A90A REV.1
Heat No.: 720280
Cia's job: LC0000910
Item: 60
Kg 11
Mt 6,63
Date: 08/05/2024
Pz No.: 1

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	26 / 29

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd.
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

FLATTENING TEST / APLATISARE

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	Q7119/A	E1	AM	5% of the lot	Good / Conform
720280	Q7120/A	E1	AM	5% of the lot	Good / Conform
720280	Q7121/A	E1	AM	5% of the lot	Good / Conform
720280	Q7122/A	E1	AM	5% of the lot	Good / Conform
720280	Q7123/A	E1	AM	5% of the lot	Good / Conform
720280	Q7124/A	E1	AM	5% of the lot	Good / Conform

Standard / Norma:

Heat N° / Sarja N°	Sample N° / Proba N°	Zone / Zona	Sc	Test Frequency / Frecventa incercarii	Result / Rezultat
720280	Q7125/A	E1	AM	5% of the lot	Good / Conform
720280	Q7126/A	E1	AM	5% of the lot	Good / Conform
720280	Q7127/A	E1	AM	5% of the lot	Good / Conform
720280	Q7128/A	E1	AM	5% of the lot	Good / Conform
720280	Q7129/A	E1	AM	5% of the lot	Good / Conform
720280	Q7130/A	E1	AM	5% of the lot	Good / Conform

AM: As manufactured / Ca fabricat E1 / E2: Ends of Sampling / Capatul testat Sc: Specimen condition / Starea epruvetei

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Customer: ROSETTI MARINO SPA	Heat No.: 720280	Kg 11	Cta's job: LC0000910	Mt 6,63	Pz No.: 1
P.O. No.: PO: 1724000838 123A90A REV.1				Date: 08/05/2024	Item: 60

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	27 / 29

Date / Data: **December 04, 2023**

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Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**
Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

SUPPLEMENTARY INFORMATION / INFORMATIE SUPLIMENTARA

STANDARD EDITIONS
EDITIILE NORMELOR

Standard:ASTM A 333 Year:2018	Norma:ASTM A 333 An:2018
Standard:ASTM A 106 Year:2019	Norma:ASTM A 106 An:2019

PRODUCT DESCRIPTION NOTES
NOTE DESCRIERE PRODUS

Note 1 is the full description of the 'Product type'	Nota 1 si descrierea completa a 'Tip de produs'
SEAMLESS HOT FINISHED TUBES FOR LOW TEMPERATURE SERVICES (WITH SUPPLEMENTARY REQUIREMENTS)	TEVI PT. TEMPERATURI JOASE LAMINATE LA CALD (CU CERINTE SUPLIMENTARE FATA DE STANDARD)
Note 2 is the full description of the 'Surface'	Nota 2 si descrierea completa a 'Suprafata'
INTERNALLY BARE, EXTERNALLY VARNISHED WITH BLACK LACQUER ,	INTERIOR NEPROTEJATE , EXTERIOR LACUITE CU LAC NEGRU
Note 3 is the full description of the 'Steel grade'	Nota 3 si descrierea completa a 'Grad de otel'
STEEL GR 6 ASTM A 333 AND GR. B ASTM A 106 NDE	OTEL GR 6 ASTM A 333 E GR. B ASTM A 106 NDE

Supplementary Information
Informatie Suplimentara

Heat	Pz	Mt	Kg
720280-000	1300	8591,46	13766
720279-000	651	4308,02	6937

Sarja	Pz	Mt	Kg
720280-000	1300	8591,46	13766
720279-000	651	4308,02	6937

Supplementary Information
Informatie Suplimentara

FULLY ALLUMINIUM KILLED	FULLY ALLUMINIUM KILLED
NONDESTRUCTIVE TEST EMI MFL ACC. TO ASTM E570	CONTROL NEDISTRUCTIV EMI MFL CONFORM ASTM E570
Long ID Long OD DEFECTS:WITHOUT OBJECTIONS	PENTRU DEFECTE Long ID Long OD : FARA OBIECTII
EMI NOTCH DEPTH Long ID - 0,40mm Long OD - 0,37mm	ADANCIME DE DEFECT EMI Long OD - 0,39mm Long OD - 0,37mm

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Tenaris

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Manufacture Process / Proces de fabricatie: **NORMALIZED** **NORMALIZATE**	Product Type / Tip de produs: **See note nr.1** **vezi nota nr.1**		Surface / Suprafata: **See note nr.2** **vezi nota nr.2**
Standard or Specification / Norma sau specificatie: **NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1,** **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**		Steel Grade / Grad de otel: **See note nr.3** **vezi nota nr.3**	Ends / Capete: **SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**
Dimensions / Dimensiuni: **ø.840" O.D. x .147" W.T.** **ø21.30mm O.D. x 3.73mm W.T.**	Schedule / Program: **80** .	Length / Lungime: **16.404 ft ÷ 21.982 ft** **5000 mm ÷ 6700 mm**	Quantity / Cantitate: **1951Pcs/buc.** **42321'02" ft** **45642,2 lb** **12899.48 mt** **20703 kg**	Nominal Weight / Greutate nominala: **1.09 lb/ft** **1.62 Kg/m**

SUPPLEMENTARY INFORMATION / INFORMATIE SUPLIMENTARA

Supplementary Information	Informatie Suplimentara
NONDESTRUCTIVE TEST EDDY-CURRENT ACC. TO ASTM E 309/A 999 HOLE DIAMETER MAX. 1 mm: WITHOUT OBJECTIONS AFTER NDT INSPECTION, UNTESTED ENDS HAVE BEEN CUT OFF ALL THE PIPES HAVE BEEN INSPECTED BY NDT INSTEAD OF HYDROSTATIC TEST WITH SATISFACOTRY RESULTS HEAT TREATMENT: NORMALIZED AT 920°C, SOAKING TIME 10 MIN. COOLING MEDIUM: AIR Confirming with the minimum/average energy value of 16/18 JOULE at -46^C for a full size 10x10 specimen" ... SEAMLESS HOT FINISHED PIPES VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE . THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER. Tenaris IT identification number for MTC: 59d]IH*\	CONTROL NEDISTRUCTIV EDDY-CURRENT CONFORM ASTM E 309/A 999 DIAMETRUL GAURII MAX. 1mm: FARA OBIECTII DUPA CONTROLUL NDT, CAPETELE NECONTROLATE AU FOST DEBITATE TOATE TEVILE AU FOST CONTROLATE NDT IN LOC DE TESTUL HYDROSTATIC TRATAMENT TERMIC: NORMALIZARE LA 920 °C, TIMP DE MENTINER 10 MIN.; MEDIU DE RACIRE: AER Confirming with the minimum/average energy value of 16/18 JOULE at -46^C for a full size 10x10 specimen" ... TEVI FARA SUDURA LAMINATE LA CALD CONTROLUL VIZUAL DIMENSIONAL S-A REALIZAT CU REZULTATE SATISFACATOARE OTELUL ESTE PRODUS IN CUPTOR ELECTRIC COMPLET CALMAT CONFORM UNEI PRACTICI DE OBTINERE A UNUI GRAUNTE FIN PRODUSUL LIVRAT ESTE IN CONFORMITATE CU CERINTELE COMENZII Tenaris IT numărul de identificare pentru MTC: 59d]IH*\

MARKING / MARCAJ

Marking	Marcaj
STENCILING _T ASTM A 333/A 106 Grade 6/B 1/2 SCH.80 SMLS HF 21.30x 3.73 NDE LT-46C _HEAT	PICTURA _T ASTM A 333/A 106 Grade 6/B 1/2 SCH.80 SMLS HF 21.30x 3.73 NDE LT-46C _HEAT

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

Acest certificat a fost editat de un sistem computerizat si este valabil cu semnatura electronica. Pe certificatul original brandul "Tenaris" este colorat in verde si stampilat. In cazul in care proprietarul certificatului original va emite o copie a acestuia, el va atesta conformitatea cu originalul, asumandu-si totala responsabilitate pentru utilizarea nepermisa sau ilegala. Orice modificare si/sau falsificare va fi pedepsita de lege.

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Customer : ROSETTI MARINO SPA

P.O. No.: PO: 1724000838 123A90A REV.1

Kg	11
Heat No.:	720280
Mt	6,63
Cta's job:	LC0000910
Item:	60
Date:	08/05/2024
Pz No.:	1

Tenaris

INSPECTION CERTIFICATE
CERTIFICAT DE INSPECTIE
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numar:	Page / Pagina:
02-23-29899	29 / 29

Date / Data: **December 04, 2023**

Silcotub S.A. Plant
93, Mihai Viteazul Blvd,
450131 Zalău, Sălaj
România
Tel: + 40 260 620720
Fax: + 40 260 661581

Customer / Client: **COMMERCIALE TUBI ACCIAIO SPA**	Customer's Order Item / Comanda clientului - Item: **SM30076/OS0000073**	Customer's Reference / Referinta clientului: .	Manufacturer's Works Order N° / Comanda de vanzare: **2261185/010**

Manufacture Process / Proces de fabricatie:	Product Type / Tip de produs:	Surface / Suprafata:
NORMALIZED **NORMALIZATE**	**See note nr.1** **vezi nota nr.1**	**See note nr.2** **vezi nota nr.2**

Standard or Specification / Norma sau specificatie:	Steel Grade / Grad de otel:	Ends / Capete:
NORM ASTM A 333 ASTM A 106, TQ 20043258/1.1, **NORMA ASTM A 333 ASTM A 106, TQ 20043258/1.1,**	**See note nr.3** **vezi nota nr.3**	**SQUARE CUT** **CAPETE NETEDE (TAIATE DREPT)**

Dimensions / Dimensiuni:	Schedule / Program:	Length / Lungime:	Quantity / Cantitate: **1951Pcs/buc.**		Nominal Weight / Greutate nominala:
ø.840" O.D. x .147" W.T.	**80**	**16.404 ft ÷ 21.982 ft**	**42321'02" ft**	**45642,2 lb**	**1.09 lb/ft**
ø21.30mm O.D. x 3.73mm W.T.	.	**5000 mm ÷ 6700 mm**	**12899.48 mt**	**20703 kg**	**1.62 Kg/m**

MARKING / MARCAJ

Marking Marcaj	
_MM _MADE LEGEND _T = TENARIS Logo	_MM _MADE LEGENDĂ _T = logo TENARIS

The product certified herein has been manufactured, sampled, tested and inspected in accordance with the stated specifications and has been found to meet the requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.	Produsul certificat aici a fost fabricat, esantionat, testat si inspectat in conformitate cu specificatiile mentionate si s-a determinat ca indeplineste cerintele. Acest certificat nu este o declaratie de origine si nici nu poate fi utilizat ca si o declaratie de origine.

CUSTOMER . THIRD PARTY	TENARIS QUALITY DEPARTMENT SIGNATURE	
INSPECTION COMPANY FIRMĂ TERȚĂ DE INSPECȚII	QUALITY CERTIFICATION DEPT. DEPARTAMENT CERTIFICARE CALITATE PUSCAS Daniela	QUALITY SENIOR DIRECTOR DIRECTOR SENIOR CALITATE CUBLESAN Rares

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

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CTA Group
This document is reproduced by a computerized system and is conform to the original
Customer : ROSETTI MARINO SPA
Kg 11
Heat No.: 720280
Mt 6,63
P.O. No.: PO: 1724000838 123A90A REV.1
Cia's job: LC0000910
Pz No.: 1
Item: 60
Date: 08/05/2024

CARBON EQUIVALENT CERTIFICATE

DATE	12/04/2024
NR	CEG 24017

Viale LIDICE 40 - 10095 GRUGLIASCO (Torino) - Italy- Tel +39 011 3145111- Fax +39 011 3145140 - e-mail: control.quality@ctaspa.com - web site: www.ctagroupwebsite.com

CUSTOMER	ROSETTI MARINO SPA			REF.CUSTOMER	P.O. :1724000838 123A90A REV.1
INT JOB NR	LC 910			PRODUCT	SMLS LOW CARBON STEEL PIPES
O.D.	1/2	W.T.	3,73 mm	ITEM	60

CHEMICAL COMPOSITION

mtc	Heat	MATERIAL DESCRIPTION	C	Mn	Cr	Mo	V	Ni	Cu						Ceq (If-IIW)
02-23-29899	720280	ASTM A 333 Gr 6	0,09	1,05	0,08	0,03	0,003	0,11	0,19						0,31
															0,00
															0,00

REMARKS

This value is calculate with long formula Ce=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 as per mill test heat analisis attached issued by Manufacturer

SIGNATURE

ISSUED BY	VERIFIED BY		
COMMERCIALE TUBI ACCIAIO S.p.A. ANGELO FAVINI QUALITY CONTROL DEPARTMENT	COMMERCIALE TUBI ACCIAIO S.p.A.		

EITI S.r.l. - Qualytube Division
Via Pietro Palmieri 29, 10138 Torino
Via Enrico Berlinguer 4, 20060 Pozzo d'Adda (MI)

qualytube

Automatic Ultrasonic test Report

Test Report
Rapporto di Prova
Prüfbericht
Rapport d'essai

Report No. - Rapporto N°
Berichten Nr. - Rapport N° : UT24012

Date - Data - Vom - date : 14/05/2024

Customer - Cliente - Besteller - Acheteur 1)
Commerciale Tubi Acciaio S.p.A.

Customer - Cliente - Besteller - Acheteur 2)
ROSETTI MARINO SPA

Order No. - Ordine N° - Bestell-Nr. - Commande N°
LC 910 - DPS 24068

Order No. - Ordine N° - Bestell-Nr. - Commande N°

Material Description- Descrizione del Materiale
Gegenstand - Dèsignation du Produit

see table below

Test Type - Tipo di Prova **Prüfart - Type d'essai**	100% Ultrasonic inspection for the detection of longitudinal imperfections, both directions	**According to - In accordo a** **Entsprechend - suivant**	EN 10246-7 - ASTM E213 - ASME V ART.4 EN ISO 10893-10:2011 (ISO 9303), Probe 2+4
Test Type - Tipo di Prova **Prüfart - Type d'essai**	100% Ultrasonic inspection for the detection of transversal imperfections, both directions	**According to - In accordo a** **Entsprechend - suivant**	EN 10246-8 - ASTM E213 - ASME V ART.4 EN ISO 10893-10:2011 (ISO9305) , Probe 1+3
Equipment **Probes 2 and 4**	GE Inspection Technologies USIP-40, serial No.1136 diameter 0.25"(6.35mm), frequency 5MHz, 45° (pipes WT<10")	**Couplant** **Probes 2 and 4 (pipes WT>10")**	Controlled water diameter 0.39"(10mm), frequency 5MHz, 45°
Reference notch	12,5 % of nominal pipe wall thickness (Minimum 0,2 mm)	**Scan Step**	5 scan step (continuous 1,25mm overlap)
Result - Esito **Ergebnis - Résultat**	**SATISFACTORY** **NO REPORTABLE INDICATIONS HAVE BEEN FOUND**		

ITEM	DIAMETER (NPS) THICKNESS (mm)	STANDARD / GRADE	HEAT	No.	METERS	NOTE
30	4"X6.02(SCH.STD)	PIPE SS ASTM A333 Gr.6+NACE OILED BE2	1240287	1	11,76	
40	3/4"X3.91(SCHXS)	PIPE SS ASTM A333 Gr.6+NACE OILED PE	129308	1	6,91	
50	1"X4.55(SCH.XS)	PIPE SS ASTM A333 Gr.6+NACE OILED PE	1234196	50	301	
60	1/2"X3.73(SCH. 80/XS)	PIPE SS ASTM A106 Gr.B+A333 Gr.6 OIL PE	720280	1	6,63	
10	1.1/2"X5.08(SCH.XS)	PIPE SS ASTM A333 Gr.6+NACE OILED PE	732804-007	8	51,51	
20	2"X5.54(SCH.XS)	PIPE SS ASTM A333 Gr.6+NACE OILED BE2	R58853	2	22,44	

issued by **Verified by** **Customer**

Qualytube
Nicolò Tuzzi - NDT Specialist
ISO 9712 / PCN/C Level 2 UT
ISO 9712 / PCN/C Level 2 PT
ISO 9712 CICPND 28229/PND/C Level 2 MT

EITI - European Institute of Technical Inspections
Dario Pasquali
Technical Director
ISO 9712 Level 3 - UT/PT/VT/RT

qualytube

EITI S.r.l. - Qualytube Division
Via Pietro Palmieri 29, 10138 Torino
Via Enrico Berlinguer 4, 20060 Pozzo d'Adda (MI)

MagneticTest Report

Test Report
Rapporto di Prova
Prüfbericht
Rapport d'essai

Report No. - Rapporto N°
Berichten Nr. - Rapport N° : MT24022

Date - Data - Vom - date : 14/05/2024

Customer - Cliente - Besteller - Acheteur 1)
Commerciale Tubi Acciaio Spa

Customer - Cliente - Besteller - Acheteur 2)
ROSETTI MARINO SPA

Order No. - Ordine N° - Bestell-Nr. - Commande N°
LC 910 - DPS 24068

Performed Test
100% MAGNETIC TEST ON PIPE ENDS

Material Description- Descrizione del Materiale
Gegenstand - Dèsignation du Produit
see table below

Test	Electromagnetic joke
Particles type	fluorescent
Joke	AC - Magnafulx
Calibration block	ASME 4,5 Kg

According to	EN 10246-12 ASTM E709 - ASME VIII Division 1 App.6/8
According to	ASTM SA960 SUPPLEMENTARY S53
Particles Description	MG ICRI G182 batch. No. 2015 04 H2
Inspection conditions	BLACK UV LIGHT - 1000 µW/cm2 min.
Pie gauge	ASME

Result - Esito
Ergebnis - Résultat
SATISFACTORY
NO REPORTABLE INDICATIONS HAVE BEEN FOUND

ITEM	DIAMETER (NPS) THICKNESS (mm)	STANDARD / GRADE	HEAT	No.	METERS	NOTE
30	4"X6.02(SCH.STD)	PIPE SS ASTM A333 Gr.6+NACE OILED BE2	1240287	1	11,76	
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10	1.1/2"X5.08(SCH.XS)	PIPE SS ASTM A333 Gr.6+NACE OILED PE	732804-007	8	51,51	
20	2"X5.54(SCH.XS)	PIPE SS ASTM A333 Gr.6+NACE OILED BE2	R58853	2	22,44	

issued by **Verified by** **Customer**

Qualytube
Nicolò Turani - NDT Specialist
ISO 9712 CSWIP 23046/PND/C Level 2 UT
ISO 9712 CSWIP 27058/PND/C Level 2 PT
ISO 9712 CSWIP 28229/PND/C Level 2 MT

EITI - European Institute of Technical Inspections
Dario Pasqualini
Technical Director
ISO 9712 Level 3 - UT/PT/VT/RT

Rosetti Marino

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order	Job	Barcode
INDRA SRL	1724000798	123A90	Q012501332

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.

TMUGF Firma — Data

MTSMD Signature — Date

Matteo Ceccarelli — **01.09.2025**

Matteo Ceccarelli

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MRB:
1724000798-QC-DB-00010

Base Load Power Hub (BLPH)

MANUFACTURERS RECORD BOOK (FINAL DOSSIER)

Document Number: 1724000798-QC-DB-00010

Document Class: 2

BALL, SBB, DBB VALVES

ROSETTI MARINO

1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
Filippo Zanellati	21/07/2025

Rev	Date	Description	Prepared	Reviewed	Approved
02	16/06/2025	Accepted for Construction (AFC)	F.CRIMELLA	G.GRANATA	A.DE CARLI
01	08/05/2025	Accepted for Construction (AFC)	F.CRIMELLA	G.GRANATA	A.DE CARLI
00	18/12/2024	Issue for Review (IFR)	F.CRIMELLA	G.GRANATA	A.DE CARLI

INDRA VALVES - ITALY

This document undergoes an issuance cycle within SDMS "Fusionline"